The Tabernacle

Its History and Structure

By the Rev. W. Shaw Caldecott

(*Member of the Royal Asiatic Society*)

With a Preface by the Rev. A. H. Sayce, D.D., LL.D.

(*Professor of Assyriology at Oxford University*)

Our pursuit is to look after the things themselves, leaving the allegorizing of them unto others.—Dr. John Lightfoot, 1650.

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PREFACE.

By the Rev. A. H. SAYCE, D.D., LL.D. (Professor of Assyriology at the Oxford University).

MR. CALDECOTT has written a very interesting volume. He has been content to study the Old Testament books themselves instead of the commentators upon them, and the result is an unconventional and original work. He has shown that there are discoveries yet to be made in the text of the Old Testament by those who will put aside traditional interpretations and examine what the Hebrew writers have actually said. All the new views put forward by him are, of course, not likely to win general assent: that is the case with all pioneering work. It is sufficient if the most important of them prove to be established on a firm basis of fact.

The kernel of the book is the history and architecture of the Tabernacle. There are mathematical calculations involved in the architectural restoration of the Israelitish sanctuary into which I will not follow him; they must be left to the professional mathematician. It is naturally only that part of Mr. Caldecott's researches which deals with subjects familiar to me about which I am qualified to write.

He has made considerable use of the much-neglected materials contained in the Books of the Chronicles, and has shown that when properly understood they are worthy of more credit than criticism nowadays is disposed to allow. That David should have left 'plans' of the future temple-buildings behind him may seem too modern an idea to many readers, but it is borne out by archæological fact. Such plans were made in Egypt and Babylonia centuries before the days of David, and some of them have survived to our own time. The profession of the architect is immensely old in the civilised East.

One of the points upon which he has rightly insisted is the historical importance of the destruction of Shiloh. It is a point to which I also have drawn attention in my *Early History of the Hebrews*. That there should be no detailed account of it in the Old Testament is not surprising; Shiloh was the centre and home of what literary culture there was in Israel during the stormy period of the Judges, and its destruction necessarily meant a break in the literary and annalistic record. It would have been at the central sanctuary only that a yearly chronicle of events could be kept.

The destruction of Shiloh seems to correspond with an archæological fact which is but just forcing itself upon our notice. The earliest monument of the so-called 'Phœnician' alphabet still remains the Moabite Stone, the date of which is the ninth century before our era. The excavations which have been carried on by the Palestine Exploration Fund on the sites of various ancient cities in the south of Canaan have failed to bring to light any

earlier relic of the 'Phœnician' alphabet. The same result has followed on the Austrian excavations at Taanach, where the Canaanitish population does not appear to have submitted to Israelitish rule until the reigns of David and Solomon. Before that date whatever written documents have been found have been in the language and cuneiform script of Babylonia. At Taanach the official records were kept in cuneiform, and it is probable that what was the case at Taanach was the case also in other cities of the country. In the Tel el-Amarna tablets of the century before the Exodus there is no trace of any other script being known.

On the other hand, the Tyrian annals translated into Greek by Menander must have been written in 'Phœnician' letters, and we know from Josephus that they went back to Hiram, the son of Abibal, the contemporary of David and Solomon. In the Book of Judges we have in the Song of Deborah and Barak a poem which is contemporaneous with the events to which it refers. Supposing that it was handed down in writing and not orally—and the allusion to 'the staff of the scribe' in Judges v. 14 raises a presumption in favour of this—was it originally written in cuneiform characters or in the letters of the 'Phœnician' alphabet? If in the latter, the archæological absence of any early example of the 'Phœnician' script is, to say the least, difficult to explain. It may be, then, that the destruction of Shiloh marks the break between the old culture and the new, between the use of the cuneiform syllabary and the Babylonian language that went along with it, and that of the 'Phœnician' alphabet and the

Canaanitish or Hebrew tongue. The importance of the fact in its relation not only to Israelitish history but also to the composition and text of the older books of the Old Testament need not be pointed out.

In his restoration of the architecture of the Tabernacle, Mr. Caldecott seems to me to have been successful. At all events, if it is admitted, the Biblical description of the building becomes intelligible and self-consistent. That more than one cubit was employed in its measurement is what would be expected by anyone who was acquainted with the metrology of ancient Babylonia or who had lived in modern Egypt. It is only with his interpretation of the Senkereh tablet, or rather of the ideographs found in it, that I must part company from the author.

His book once more impresses upon us the necessity of archæological research in Palestine. There are questions suggested by it which can be settled only by the spade of the excavator. If Mr. Caldecott is right in his theory as to the origin of the *Râmet el-Khalîl* near Hebron, a new light will be cast on the social and religious condition of Israel in the age of Samuel. And in reading what he has to say about Shiloh, more than once I have been inclined to exclaim: 'Oh that the site could be archæologically explored!' Until Palestine has been made to yield up its buried past like Egypt and Babylonia, the Old Testament will remain a battle-ground for disputants who have no solid basis of fact on which to stand.

A. H. Sayce.

THE RÂMET ENCLOSURE.

Portion of West Wall—Exterior.

[*See Introduction, page x.*

INTRODUCTION.

I WRITE from the once Holy City, and am happy in knowing that the object of my visit to Palestine has been satisfactorily attained. Let me say, in brief, what that object was, and in what manner the problems that I brought with me have been solved. I came prepared with a literary demonstration of the cubit of the Bible, as given to the Royal Asiatic Society[1] and included in this volume. That instrument I was desirous of applying, as a test both of itself and of the subject, to the most remarkable ruin within the limits of the ancient Jewish State.[2] When I say 'ruin' I limit the term to include only buildings dedicated to the worship of God or the service of man. The special ruin to which I refer is a large rectangular ground-figure enclosed within monolithic stone walls, standing near to, though not visible from, the ancient highway leading from Jerusalem to Hebron. Countless travellers have looked on this mysterious handiwork of man with reverence and wonder. Each must have speculated as to who reared its massive masonry, and for what purpose. Archæologists have

[1] Reproduced in this volume as Part II. p. 107 *et seq.*

[2] See Dr. Edward Robinson's descriptions in Part I, Chapter 2, pp. 42, 43.

agreed that we have not here the remains of a church. Nor could these low walls of solid stone have been those of any military fortification, as the work is of too refined and time-engrossing a character to have been done for the purposes of war. The questions remain, to whom do we owe these vast substructions, and for what purpose were they laid? To these questions I believed that I had an answer, and I was supremely anxious to visit *Râmet el-Khâlîl* and to satisfy myself on certain points before giving that answer to the world.

For this purpose I made my way to Hebron, where I was received with the most cordial hospitality by Dr. and Mrs. Paterson, of the United Free Church Medical Mission, stationed there. From Dr. Paterson I also received much-needed and invaluable assistance in taking measurements, and in making other arrangements necessary in a population so hostile to Christians as is that of Hebron to-day.

As I am publishing, with this, a reconstructed plan of the enclosure, together with sundry photographs of it, I do not need to add many topographical details. I may, however, be allowed to show the significance of some figures given in the drawing of the Plan of reconstruction. The first and in some respects the cardinal result attained by my measurements is a conviction that the *Râmet* ruin is a work of Jewish, or rather of Israelitish origin, and that the standard of length used in its construction is that of the newly-discovered Hebrew cubit. The thickness of the walls throughout, where perfect, is a good illustration of this fact. The foundation, wherever

visible, has a uniform thickness of 6 feet, or 5 cubits. The foundation being built of this dimension to the level of the interior, it is then rebated or reduced by the length of a single cubit, and is 4⅘ feet through. Its height above the foundation is 6 cubits (7 ft. 2·4 ins.), each of the two courses of stone having an average height of 3 ft. 7 ins., as stated in the *Survey of Western Palestine*, published by the Palestine Exploration Fund Society (vol. iii. p. 322).

A similar harmony runs throughout the whole series of actual measurements, the unbroken building cubit of a-foot-and-a-fifth being the common denominator of all the dimensions of original work still standing.[1] This is particularly noticeable in the diameter of the well, which has a measure of 8 cubits (9⅗ feet), and is surrounded by a platform 15 cubits in the square (18 feet).

One could not expect a structure that may have resisted the weathering influence of three thousand years to show as crisp and exact a set of figures as it did when first erected. Nor must we leave out of view the depredations of an ignorant peasantry. Of this there is a somewhat obvious case in the rough chiselling of one of the border stones of the well-platform into a trough out of which small cattle may drink. Happily the stone is still *in situ*.

Nor are the four walls which formed the enclosure perfect. That on the south side is in an almost unbroken

[1] This fact is of the first importance, as Hebrew architects and builders did not usually use fractions in conjunction with whole cubits. For measures less than a single cubit, see pp. 220, 223.

condition, many of its stones being 12 and 15 feet in length, laid without mortar, and truly squared. The west wall is in fair condition,[1] as is a portion on the north side. The east wall has almost completely disappeared, though its line can still be traced. There is thus no difficulty in determining the size of the enclosure as originally constructed. To this point the greatest interest attaches, as it is well established that every sacred area amongst the Jews was not built upon by its surrounding wall, but was enclosed by it. Keeping this principle in view, I was careful to see if there were any relation in size between the area enclosed at *Râmet* and the primitive court of the Tabernacle—which, in the times of the Judges, stood successively at Gilgal, Shiloh, Nob, and Gibeon. As the large or ground-cubit was used in all such delimitations, we know from Exodus that the People's or Altar Court of the Tabernacle was a square of 50 cubits or 75 English feet, and that the great Altar of Sacrifice stood on its western line, equidistant from its two ends. Judge of my surprised delight when I found that the *Râmet* enclosure gave a square of 100 cubits or 150 English feet in the clear,[2] showing it to have had an area exactly four times that of the Tabernacle Court of Worship. The growth of the nation in the centuries that passed between the great Lawgiver and the last of the Judges would make such an enlargement necessary.

[1] See photographs of portions of its interior and exterior, opposite pp. 3 and 17.

[2] Not including those portions of the foundation built only to the level of the floor.

THE RÂMET ENCLOSURF.

Interior of West Wall, shewing Well-platform and Ledge. [*See Introduction, page xiii.*

I must no longer conceal from my readers the fact that the theory which I took with me to Palestine, and which I wished to test by an appeal to the topography of *Râmet*, was that the enclosure now standing was built to surround with a stone fence 'the Altar to Jehovah that Samuel built in Ramah,' about 1050 B.C. (1 Samuel vii. 17).

In furtherance of the correctness of this view let me enlarge for a moment on the requirements of such an altar, as deduced from all that we know of the Mosaic economy of sacrifice. Having an east aspect as an essential,[1] there would require to be, in addition to the altar-court in which the people assembled, space for the ministrations of the priests and for the slaying of the sacrifices.

In the Tabernacle these ends were attained by the curtaining of a second square of 75 feet lying to the west. There being no Tabernacle at Ramah, a compromise was effected, by which a space about equal to one-third of the Great Court was included within the stone-walling. The interior length of the enclosure is 204 feet, it having been imperative that the additional width of 54 feet should be measurable either by the large cubit for Survey purposes or by the medium cubit for building purposes. I need not point out that 54 feet is equal to 36 large and 45 medium cubits.

The present condition of the ruin shows that the added 54 feet was, at one end of the addition, divided into three

[1] The north and south walls at *Râmet* run east, with an inclination of 4° to the south, as recorded in the third volume of the *Survey of Western Palestine*.

squares of equal size. There are, as partially shown in one of the photographs, two paved platforms (of different heights of paving) in the south-west corner of the *Râmet* enclosure. Each of these is a square of 18 feet, a third square of the same size intervening between them and the line of the large quadrangle in which the altar stood. This third square was probably used as a wood-pile for the altar fires, the centre square as the place for the laver, and the corner square still retains its intended use as that in which the well was dug that supplied water for the washing of the sacrifices and the repeated ablutions of the priests.

It is not necessary here to linger over minor points of coincidence, though there are many such.[1] But I cannot omit a short reference to the well itself. This is, without exception, the finest bit of ancient masonry in the Land of the Bible. Each stone is squared and set without mortar. The well, fed by an interior spring, was brimming full of clear water when I saw it, but each stone visible had a concave face, without margin or boss. The stones are not of a uniform size or thickness, but each concentric circle or course was completely formed of full-sized stones, all of the same thickness. No such careful and elaborate work as this well shows is to be seen anywhere else in Palestine, so far as my reading and observation go.

[1] The most obvious of these is, perhaps, that of the ledges as shown in the 'interior' photograph and referred to in the table of references on the reconstruction plan. The length of these was possibly determined by the size of the stone slabs which rested on them, as they are not uniform and do not conform to the whole-cubic principle. As such tables were not ordered in the specification, a certain latitude may have been taken in their construction.

Let me add a few words of description as to the desecration which has been allowed to take place at *Râmet* in quite recent times. The Fellaheen have been permitted to build two walls of rubble stone across the enclosure, dividing it into three nearly equal parts. Two of the three spaces thus created have been made into gardens by carrying some tons of earth to overlay the rock. The space to the west in which the well stands is comparatively clear. All search for the main entrance gate in the centre of the east wall is further barred by the erection, within the enclosure, of a rubble house, untenanted. Without the line of this wall lie great heaps of stones piled in confusion. Were the earth and stones that now encumber it removed, the question of Samuel's possible connection with the *Râmet el-Khălîl* could be finally and authoritatively settled. The sills of the north door and east gate might be recovered, and even the foundation of the altar-base might be distinguishable.

It is to be hoped that this work will not be left to private enterprise. The one man to whom it should be entrusted is Mr. Macalister, the Officer of the Palestine Exploration Fund, now working with a band of trained excavators in Palestine. Should he be set to do the work of verification, the confidence of the public in the accuracy of any report that he may make will be secured, and, in my belief, the *Râmet el-Khălîl*, when scientifically examined, will take its place as at once the oldest and most authentic Palestinian memorial of Israel's past religious history.

In concluding this very imperfect sketch of the origin and probable use of a monument which may be found

to antedate the establishment of the Hebrew monarchy, and incidentally to settle the greatest unsolved problem of Biblical geography, i.e. the locality of Samuel's Ramah, I may be permitted to refer to the encouragement given to me to make these investigations by Sidney Hill, Esq., of Langford House, Langford, Somerset, and to my own sense of pleasure at being able to put the results of them into such a permanent record as we have before us in this volume.

W. SHAW CALDECOTT.

JERUSALEM.
February, 1904.

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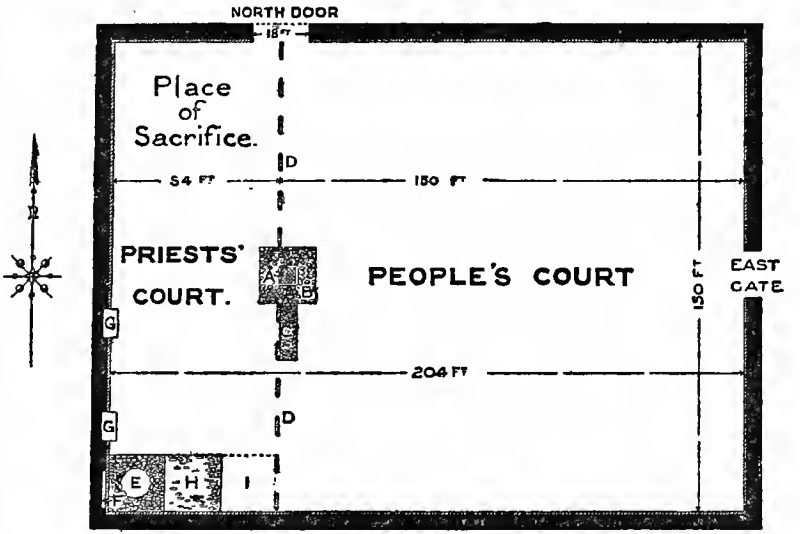

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J.E. WILLCOX C.E. del.

WESTMINSTER & BIRMINGHAM

PART I.

THE HISTORY OF THE TABERNACLE.

CHAPTER I.

TO THE DESTRUCTION OF SHILOH.

THE Tabernacle and its Tent were set up on the first day of the ecclesiastical year, and a great passover service held thereat on the first anniversary of the Exodus.

A few days were spent in perfecting its ceremonial organization, and on the first day of the second month a census of the people was taken, and the princes of the tribes selected. Preparations were then made for journeying. Six covered wagons, each drawn by two oxen, were presented by the princes on behalf of the tribes, and, from the uses to which these were put, we gain a view of the relative sizes of the tabernacle parts, and of the portability of the whole construction.

To the children of Kohath, the second son of Levi, and the grandfather of Moses and Aaron, was relegated the duty of carrying, upon their shoulders, the ark of the covenant, the two altars (one of brass and one of gold), and all the furniture and vessels of the sanctuary. The ark was wrapped in the most sacred veil, and the screen of the Tabernacle was folded together and carried free. The removal of this portion of the structure was under the direct care and supervision of the High-priest, and did not allow of the use of any vehicle.

To the Gershonites fell the duty of conveying the twenty-one curtains of the tent and the Tabernacle, the skin covering of the tent, and the sixty linen-hangings of the surrounding court, with their pegs and ropes. Besides these there were two screens. One of these was the embroidered screen of the east gate. The other is that which is described as 'the screen for the door of the court which is by the tabernacle and the altar' (Numbers iii. 26).[1] We have, in these words, the first recognition in the text of that north gate which was directly opposite to the brasen altar. We learn also that it had its own screen, which was unembroidered and of white linen, and was probably put in place only when the court of the Tabernacle was closed. It would require to have been 15 feet in length to have closed the opening.[2] There would be a centre-post opposite the line of the *Soreg*.

Eleazar, the prospective High-priest, was appointed to oversee this department of the transport, and two wagons were detailed for his use.

To the Merarites, as the descendants of the youngest of the sons of Levi, the heavy work of the removal was entrusted. Forty-eight boards, each $12' \times 1\frac{4}{5}' \times \frac{3}{10}'$, sixty wooden standards, with their metal sockets, twelve pillars

[1] Unless otherwise specified, all Scripture references of this volume are to the text of the Revised Version of the English Bible.

[2] It was the removal of this screen, which was probably composed of two curtains, that is referred to in the words 'Samuel opened the doors of the house of the LORD' (1 Samuel iii. 15). This was done at the dawning of the morning, the offering of the morning sacrifice being completed before the rising of the sun.

and fifteen side-bars, together with the two pieces of the ridge-bar, were their care. For the transport of the timber of the Tabernacle, four wagons were given, the whole being under the hand of Ithamar, the younger son of Aaron.

1. All was now materially arranged for a start from Sinai. But one duty still remained to be performed, which was the dedication of the brasen altar by anointing (Exodus xxix. 37; Numbers vii. 84–88). Not until this was done was it 'most holy,' and capable of fulfilling its great function in the economy of Jahvism.

A week was spent in the performance of this ceremony, during which many gifts were made for the service of the altar. These were 'spoons' with which to handle the incense, 'bowls' in which to convey the sacrificial blood to the altar for sprinkling, and platters or trays on which to carry the sacrificial joints. All these were of gold or silver, and remained to after-times as part of the utensils for the service of the altar.

This week of dedication followed the first solemnisation of the passover in the wilderness, and on the twentieth day of the second month the guiding cloud lifted.

In an instant all was activity! The Tabernacle was taken down, having stood for fifty days only. The Gershonites moved forward first, as by the eleven curtains which they carried, the new site for the tent had to be marked out.[1] The Merarites followed with the standards

[1] For the reason of this see pp. 208 and 230.

and boards and pillars to be set up. Last, came the holy vessels, which on arrival were placed, by priestly hands, in the already-erected Sanctuary. Such, repeated again and again, was the order in which the Tabernacle moved from place to place during the whole period of its history.

2. The general direction taken by the guiding cloud in removing from Sinai is indicated in the words 'And the cloud abode in the wilderness of Paran' (Numbers x. 12). If by Paran we are to understand 'that great and terrible wilderness' which lay between Horeb and Kadesh-Barnea[1] (Deut. i. 19), in the heart of Arabia, now known as *Badiet et-Tîh*, the pathless Wilderness, the direction of the route taken by the Israelites will not be difficult of decision.

In this wilderness the oasis of Zin (= lowland, as opposed to the uplands of the Negeb) was the tract of pasture-land now known as the *Wady Qadees*—the term 'wilderness' having reference to its non-occupation by man, and not being meant to describe its physical qualities. The *Wady Qadees* or *Kadis* is an irregularly-surfaced plain, several miles in diameter. In this fertile amphitheatre is the *Ain Kadis*, one or more never-failing springs of clear water, rising at the foot of a limestone cliff, which,

[1] On Samuel's death David is said to have gone down 'to the wilderness of Paran.' Thence he sent to Carmel and Maon to Nabal, having heard that he was shearing his sheep. These places are about 68 miles north of *Ain Kadis* (1 Samuel xxv. 1). As all journeys were performed afoot, it is impossible to limit the northern extension of the term 'wilderness of Paran' to any distance from Carmel greater than this would allow of. The more so as David claimed to have protected Nabal's property.

flowing down the valley, spread fertility on either hand. Before being lost in the sand, a few hundred yards away, they fill two stone wells or basins built up from the bottom with limestone blocks. Around lie stone troughs for watering stock.

The principal event of the first stay at Kadesh, now *Kadis*, was the sending of the spies in advance to search out the land (Numbers xiii.). It is noteworthy that they traversed the land, probably in companies of two or three, as far as the pass of *Hûnîn* in the latitude of Tyre, beginning from the point at which the camp lay in the oasis of Zin. This rich valley was provisionally included in the national territory, the frontier of which ran to its immediate south (Numbers xxxiv. 4), and was allotted to the tribe of Judah (Joshua xv. 3).

These facts will prepare us for the reception of a little recognised aspect of the forty years' wanderings, which is, that with the exception of a short time spent in travel across the Arabah, thirty-eight years were spent at the central station of Kadesh-Barnea. The evidence on this behalf is purely textual and is convincingly clear. The record is as follows:—On leaving Hazeroth the congregation pitched in the wilderness of Paran (Numbers xii. 16). The itinerary gives seventeen marches—each probably the effort of a single day[1]—from Sinai, through the wilderness of Paran, the last

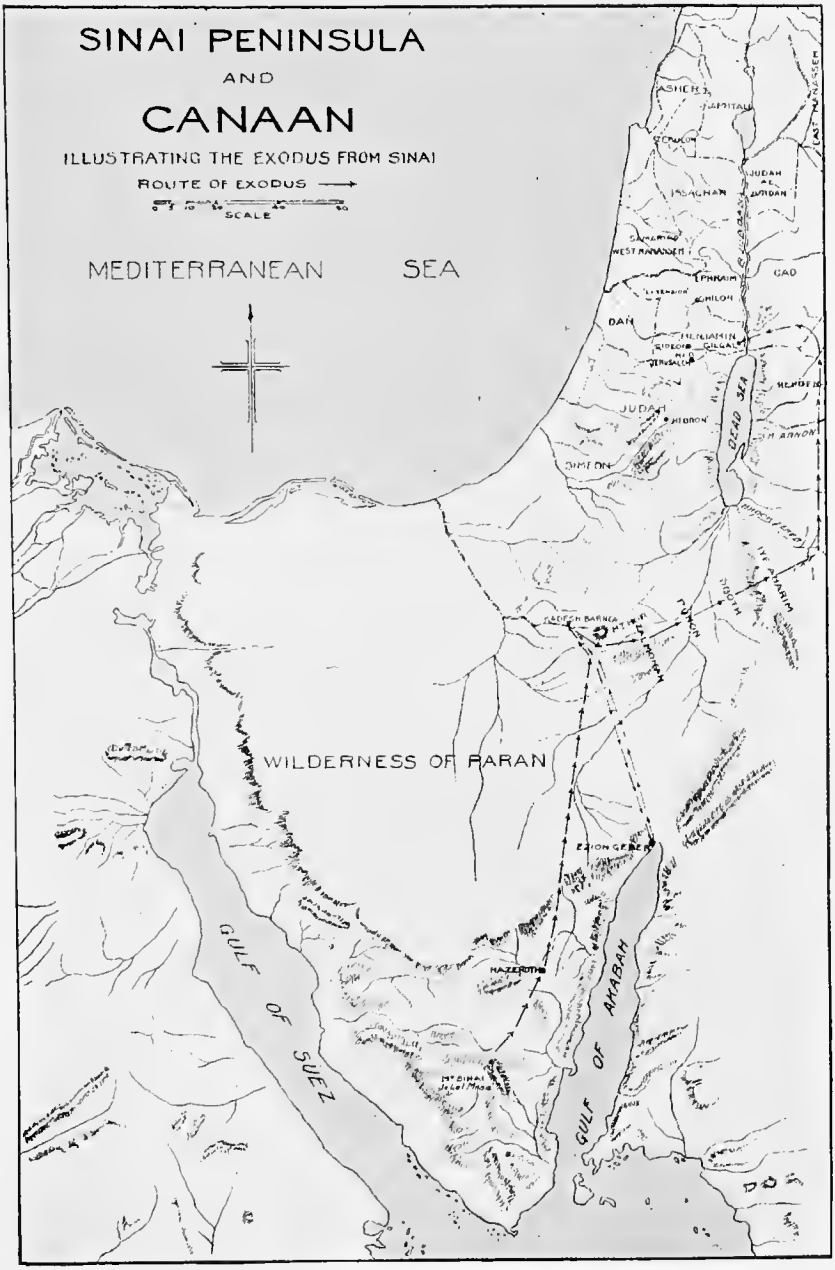
[1] Thus Hazeroth is described as a three days' journey from Sinai (Numbers x. 33). The encampments were at Taberah (Numbers xi. 3), Kibroth-hattaavah, and Hazeroth (Numbers xi. 34–35). Fourteen names follow Hazeroth in Numbers xxxiii.

being to Bene-jaakan (Numbers xxxiii. 16–31). There is more than a suspicion that this place was that afterwards named Kadesh (= the Holy), from the long stay of the Tabernacle there. Originally the home of the children of Jaakan, the descendants of Seir, the Horite (Genesis xiv. 6 and xxxvi. 27; 1 Chronicles i. 42), who may have built the limestone basins to conserve the water of the springs, it became known, later, as the Wells of the Children of Jaakan (Deut. x. 6). This was the place to which the children of Israel came when they encamped on the other side of the wilderness of Paran, at Kadesh (Numbers xiii. 26). It is a faint reminiscence of those far-off days of the troglodyte inhabitants of the oasis of Zin, that the name of the neighbouring station of Hor-haggidgad, = the cavern of Gidgad (Numbers xxxiii. 32), has prefixed to it the Horite name. This is the Mount Hor on which Aaron died (Numbers xx. 23), and which is stated to be situated 'by the border of Edom,' thus showing its proximity to Kadesh,[1] of which the same is predicated in the 16th verse of the same chapter. To this subject we must return on a later page, as it is the hinge on which the whole question of the later stages of the Exodus route turns.

[1] 1. The biblical indications as to the situation of Kadesh are these:—

(1) It was eleven days ordinary caravan journey from Horeb when travelling the Edom road (Deut. i. 2). A caravan travels from fifteen to eighteen miles *per diem*. The direct distance from Sinai to *Ain Kadis* is one hundred and fifty miles. In the itineraries of Numbers seventeen marches are given by name, showing that those taken by the host were shorter than was usual. This is what we might anticipate.

(2) Kadesh is described as 'a city' on the edge of the boundary of Edom


SINAI PENINSULA
AND
CANAAN
ILLUSTRATING THE EXODUS FROM SINAI
ROUTE OF EXODUS
SCALE
MEDITERRANEAN SEA
WILDERNESS OF PARAN
GULF OF SUEZ
GULF OF AKABAH
DEAD SEA
ASHER
ZEBULUN
ISSACHAR
JUDAH
EPHRAIM
GAD
DAN
BENJAMIN
JUDAH
HEBRON
SIMEON
KADESH BARNEA
EZION GEBER
HAZEROTH
MT. SINAI
Jebel Musa

3. As has been stated, the first year of the wanderings was spent in travelling to Sinai and in a prolonged stay there. Sinai was left on the twentieth day of the second month of the second year of the Exodus (Numbers x. 11). The actual days of travel to Kadesh were seventeen, but there were delays, as at Hazeroth, where they 'abode' and rested (Numbers xi. 35). It is thus impossible to fix the time of the arrival at the wells of the Beni-Jaakan, but the stay there was sufficiently long to allow of the forty days' absence of the twelve spies.

On the morrow after their defeat by the Amorites at the place afterwards called Hormah (Numbers xiv. 25, and Deut. i. 44), the congregation was bidden to leave

(Numbers xx. 16 and xxxiv. 3). It was then occupied by the Hebrew host, as an enclosed place, or 'Ir,' and was otherwise unclaimed. The calling of it 'a city' is an undesigned proof of its long-continued occupation by the Hebrew host.

(3) The well Beer-lahai-roi is described as being between Kadesh and Bered (Genesis xvi. 14). As Bered is identified with *Halasah*, thirteen miles south of Beersheba, the geographical conditions suit *Ain Kadis*.

(4) It lay to the south of Arad, now *Tell Arad* (Numbers xiv. 45 and xxi. 1–3). *Ain Kadis* is almost due south of *Tell Arad*.

(5) It was near the hill country of the Amorites (Deut. i. 20). The Amorites are described as living in the 'mountain' or elevation on which Arad was situate (Deut. i. 44).

II. The following is a list of the Scripture designations of the place afterwards known as Kadesh :—

(1) En-Mishpat, the same is Kadesh (= the spring of judgment, Genesis xiv. 7).

(2) Bene-Jaakan (=the children of Jaakan, 1 Chron. i. 42 ; Numbers xxxiii. 31).

(3) Beeroth-bene-Jaakan (=the wells of the sons of Jaakan, Deut. x. 6).

(4) Meribah-of-Kadesh, in the wilderness of Zin (Numbers xxvii. 14 ; Deut. xxxii. 51).

(5) The wilderness of Zin, the same is Kadesh (Numbers xxxiii. 36).

(6) The waters of Meriboth-Kadesh (Ezekiel xlvii. 19 and xlviii. 28).

(7) 'Kadesh-Barnea' has ten occurrences in the Hexateuch.

(8) 'Meribah' has five occurrences in the Pentateuch and Psalms.

Kadesh, and take their journey into the Wilderness of the Red Sea. This the humiliated people did, and they reached Ezion-Geber, which, as the crow flies, is seventy-five miles south of Kadesh.

Of that journey of disgrace and punishment not a single incident is recorded. Of the stations at which they must have encamped, three only are named, if we exclude the two termini (Numbers xxxiii. 32–36). The return journey is described in a single sentence: 'They journeyed from Ezion-Geber and pitched in the wilderness of Zin, the same is Kadesh.'

It is appropriate that an expedition which was altogether punitive should find mention in the historical records of that time, and nothing more. Beyond the fact of removing them from further attack by the Amorites it had no apparent object, except a moral one.

Eight or ten months would seem to have been spent on this expedition. This period is arrived at by the statement that they went over the brook Zered on the anniversary of their first departure from Kadesh (Deut. ii. 14).

If there are no exact data to give us the time of their first departure from Kadesh, we know to a few days the date of their return. 'They came into the wilderness of Zin (to abide there) in the first month' (Numbers xx. 1). That this was the first month of the third year of their wanderings hardly admits of doubt to an unbiassed mind. It is probable that they arrived at Kadesh in time to keep the Passover on the fourteenth day of that month, but no mention is made of the fact. As the

ordinary sacrifices were not offered during the years in the wilderness (Amos ii. 10; v. 25), it is possible the seasons were merely observed without them. This provisional state of things, as regards sacrifices, is referred to by Moses in Deut. xii. 5–9.

It thus transpires that two whole years were spent by the fugitives from Egypt in wandering from place to place. These were the first two of the forty. It is to these years that the Psalmist refers:

'They wandered in the wilderness in a desert way;
They found no city of habitation.
Hungry and thirsty,
Their soul fainted in them.
Then they cried unto the LORD in their trouble,
And He delivered them out of their distresses.
He led them also by a straight way,
That they might go to a city of habitation';
(Psalm cvii. 4–7):

that 'city' being the enclosed camp at Kadesh (Numbers xx. 16).

4. Having arrived at Kadesh for the second time, the congregation and the Tabernacle did not again remove until thirty-seven years had passed.[1] Aaron's death took place at the first station after their final departure, and it occurred on the first day of the fifth month of the fortieth year of their exile (Numbers xxxiii. 38).

[1] The sentence pronounced upon them for their unbelief was not that they should be 'wanderers forty years,' but that they should be 'shepherds in the wilderness' for that time (Numbers xiv. 33, *margin*).

This was the fifth lunar month after the Spring equinox, and corresponds with the end of July or beginning of August. In March or April thirty-seven years before, the congregation had arrived there from Ezion-Geber.

Of these thirty-seven years, the 'many days' of Deut. ii. 1, few or no incidents are recorded. The adult males of the nation were under sentence of death, and during these years the merciful punishment fell gradually and almost insensibly.

One incident of ingratitude and rebellion, which had far-reaching consequences, is recorded. It is the only incident so recorded, and this, not because it was intended to give any particulars of the history of the people, but because it became the reason for the exclusion of Aaron and Moses from the promised land. That event was, of course, the murmuring of the people because there was no water, or not enough water (Numbers xx. 2–13). This solitary incident of the thirty-seven years at Kadesh has suffered misapprehension in two directions. One, by confounding it with a similar outbreak at Rephidim soon after the departure from Sinai (Exodus xvii. 1–7). But the two outbreaks are clearly distinguished in the blessing of Moses—the former being called Massah (= proving), and the latter Meribah[1] (= strife), (Deut. xxxiii. 8). The other mistake is that of supposing that the water from the smitten rock 'followed' the wandering tribesmen in their long

[1] This name was, at the first, applied to the sin at Rephidim (Exodus xvii. 7), but was afterwards reserved to Kadesh.

pilgrimage. This idea is based upon a superficial view of Paul's words—'They drank of a spiritual Rock that followed them' (1 Corinthians x. 4). As now explained, the thirty-seven years stay of the Tabernacle at Kadesh renders such false exegesis impossible — the increased flow of water continuing for that time, and following its own law of gravitation. The limestone rock at *Ain Kadis* became a type of Christ, and the *source* and *constancy* of its increased flow the point of the Apostle's argument with regard to it.

5. As Aaron died immediately after the departure from Kadesh-Barnea on the first day of the fifth month of the fortieth year of exile, it is evident that but eight months elapsed between that event and the crossing of the Jordan on the tenth day of the following year (Joshua iv. 19). Of this period of eight months, one was spent on the plains of Moab mourning for the death of Moses (Deut. xxxiv. 8), and another at Mount Hor for the death of Aaron (Numbers xx. 29). The actual time spent in travelling from Kadesh, and in the conquest of Eastern Palestine, till the arrival at Jordan, could not have been more than six months. As the river was crossed four days before the holding of the passover in Spring, these were the months of Winter.

It was thus early Autumn when the host finally moved from the wells of Kadesh on its last journey. The direction taken was eastward, with a northern inclination. A single copyist's error in Numbers xxi. 4 has lead to a prevalent belief that the promised land

was reached by way of the Red Sea. We have but to read *Salt* Sea for 'Red' Sea in that verse, as in Deut. iii. 17, and the harmony of the whole narrative is restored. The change was possibly made to bring the text into accord with the same phrase in Deuteronomy (Deut. ii. 1). But in this case the reference is to the *first* departure from Kadesh, and is historically right. In the other the reference is to the *second* departure from Kadesh, when the route lay across the Arabah, south of the Dead Sea.

There is but one broad valley of access that leads to the oasis of Zin, so that the Hebrew host, both in coming and going, had to travel by it. This valley runs from the east, and terminates at the foot of a singular and isolated peak, which they passed and re-passed. It is variously known in the text as:

Moseroth, Numbers xxxiii. 30.
[1] Moserah, Deut. x. 6.
Hor-haggidgad, Numbers xxxiii. 32.
Mount Hor, Numbers xxxiii. 38.

A comparison of these texts will show that the Hebrew host camped at the foot of this mountain on their first visit to Kadesh, and that they again pitched their tents there on their final departure from Kadesh.

It was at this time that Aaron died, and to the fact of his burial there is to be attributed its change of name to Mount Hor, which name is equivalent to the Mount

[1] 'Moserah or Moseroth must be considered as equal to Mount Hor' (Hastings' *Dictionary*, vol. i. p. 805).

of Mounts. Deut. x. 6 is definite in telling us that at Moserah Aaron died.[1] Within a march of *Ain Kadis* stands this remarkable and isolated hill, which bears the Arabic name of *Jebel Moderah*, and which the weight of evidence shows to have been the place of Aaron's death and burial. The similarity of name to Moserah will not escape notice.

6. It was during the thirty days mourning for Aaron that the King of Arad, living in the Negeb, showed signs of hostility to the Hebrew host, and captured some of the stragglers from the camp. These were probably herdsmen and shepherds in charge of grazing stock.

The ruins of the city Arad are still to be seen on a white-crowned hill about sixteen miles south of Hebron, and are known as *Tell Arad, Ain Kadis* being about eighty miles from Hebron. The reason given for the offensive action of the king in the Negeb is, that he heard Israel was moving, from their long stay at Kadesh, 'by the way of the spies' (*marg.* Numbers xxi. 1). Clearer testimony than this as to the direction taken by the host is hardly to be desired. The consequence of his

[1] The parenthesis of Deut. x. 6 and 7 not only breaks into Moses' narrative of events, but associates the *first* departure of the host from Kadesh, when it travelled to Ezion-Geber by way of Jotbathah (cf. Numbers xxxiii. 33–34), with the *second* departure from Kadesh, when Aaron died. If verse 8 be read in immediate succession to verse 5, the sense will be clear, and the facts related in them will be seen in their true perspective. The Revised Version's inclusion of verses 8 and 9 within the parenthesis is misleading. Meanwhile the present readings of vv. 6–7 cannot be defended *in their sequence*. While both contain statements of historical truth, that of the latter verse is anterior to that of the former.

action was a national resolution to carry out the ban of Deut. xx. 16–18, and to save nothing alive that breathed, if God gave victory.

The struggle is very briefly described (Numbers xxi. 1–3). The Canaanites were delivered up, and the place called Hormah (= devoted). This is not a proper name, but an appellative, signifying the total destruction to which every living thing was doomed within the town or district so described. We have a similar use of the word in the case of Zephath, a town destroyed by Judah after the death of Joshua (Judges i. 17).[1] The fury with which Arad was treated, as a place beyond the bounds of humanity and mercy, was a blow of sufficient severity to prevent further molestation, and the way to the Arabah lay open. It was, of course, the place of their defeat thirty-eight years before (Numb. xiv. 45; Deut. i. 44, 45).

It was also during the stay at Mount Hor that messengers were sent to Petra, the capital of Edom, to request permission for the Hebrew host to pass through their territory.

Thirty-eight years before, similar permission had been asked for and had been refused (Numbers xx. 14–21). The terms offered now were the same as then, that the travellers were to go upon the highway, and to pay for anything consumed by themselves or by their stock.

[1] By the time of David one of the two places was known by the name of Hormah, which had then superseded the Canaanite name (1 Samuel xxx. 30). Zephath is probably meant, as its name was officially changed to Hormah (Judges i. 17), and as such it was apportioned to the division of Simeon (Joshua xix. 4). Zephath, now *Sebaitā*, is about 25 miles in a N.N.E. direction from *Ain Kadis*.

During these years many changes had taken place, and amongst others this, that a sense of the miraculous preservation and defence of the Hebrew host had penetrated the mind of the Edomite king and people. The consent now asked for was granted, being based upon the results which a refusal would have entailed. The congregation, therefore, prepared to leave Mount Hor and to enter the Edomite territory, a special order of care and warning being issued by Moses in anticipation of the march (Deut. ii. 2–8). This order contains two indications of the direction to be taken. One is in the words 'Turn you northward'; the other is a statement of the fact that, having passed through the Edomite territory, they travelled by the great road which, even then, ran northward from Ezion-Geber in the direction of Damascus.

The fact of this concession from the children of Esau in Seir, having been so generally overlooked by writers dealing with this period of Hebrew history, is one which is the more remarkable as it is twice referred to, as a fact, in the second chapter of Deuteronomy. In verse 4 we have it spoken of in anticipation, and in verse 29 in retrospect. From the latter reference we learn that Moab acted in a somewhat similar way,[1] and that it

[1] The action of Moab is to be differentiated from that of Edom by the statement of Deut. xxiii. 4, that when the host came from Egypt they did not meet it with gifts of bread and with water in the way. The route travelled was not that of the great highway through Kir-of-Moab and Dibon, but they are described as pitching on the other side of Arnon, which is in the wilderness (Numbers xxi. 23). Their stations are given as Beer, Mattanah, Nahaliel, and Bamoth. They thus kept away from Moab towards the east, and obeyed the injunction not to meddle with Moab. By this route they

was not until the river Arnon was reached that fighting became necessary.

7. The conclusion thus plainly stated as to the direction of the Exodus taken after leaving Kadesh Barnea is borne out by the particulars of the case, if the stations at which the Hebrews camped be examined. The earlier of these need only occupy our attention, as the distance across Seir, between *Jebel Moderah* and the *Wady Hessi* (= the brook Zered), is not more than sixty miles, and four intermediate names only are given. Each of them represents a day's march, of about twelve miles.

First Stage.

Kadesh Barnea to Mount Hor.

Second Stage.

On leaving Mount Hor, the 'king's way' of Numbers xx. 17[1] would lead them at once to the descent into the valley or Ghor of Akabah. The watershed of the Akabah lies about midway between the two seas, and is rather more than 2,000 feet above the level of the Dead Sea. It is evident that any king's way passing from east to west

found the rivers shallower and more easy of passage. After the passage of the Arnon they turned westward, and this brought them into conflict with the Amorites. In his endeavour to avoid this, Moses offered the King of Heshbon to buy food and water for money, as he had done from Edom and from Moab. This was refused. Till this time there were both sales and gifts.

[1] This will have been the old Babylonian highway, Gen. xiv. 6, 7.

would go as nearly as possible over the saddle of the Akabah. As, however, no water is to be found there, it would deflect a little either to south or north, so as to secure for travellers this necessary element. To the north of the watershed flows a perennial stream, named *El-Jeib*, in a valley which widens out from a width of half-a-mile to a breadth of ten miles. Twenty-four miles south of the Dead Sea, and at the level of the Mediterranean (1,292 feet above the Dead Sea), are some remarkable lacustrine terraces of marl, sand, and gravel, with abundant water flowing below them, lined with thickets of palm, tamarisk, willow, and reeds.

As the first station at which the host encamped was named Zalmonah (= terraces or shady places), it is possible that it was on these, or similar terraces further west, that the camp was pitched. The name itself is evidence that the Tabernacle and its attendants were travelling a road which lay in terraces one above another.

Third Stage.

The next station was named Punon (= ore-pits), and is to be sought on the eastern side of the Ghor, and north of the city of Petra (Numbers xxiv. 19).

In the required position, east-of-south of the Dead Sea, is a site named *Phanon*, where were copper-mines mentioned by Eusebius and Jerome.

They lie in 'parched places in the wilderness, a salt land and not inhabited' (Jeremiah xvii. 6).

Hence we read that the soul of the people was much discouraged because of the way (Numbers xxi. 4), for there was neither bread nor water. As from this station they are said to have pitched in Oboth, it was appropriately here that the brasen serpent was made and uplifted (compare Numbers xxi. 10 and xxxiii. 43). The tract they followed was naturally one of ascent from the valley of the Ghor, which made the want of water the more felt. It does not appear that their sufferings from thirst were in any way mitigated.

Fourth Stage.

The king's way, in which Moses promised to travel, was almost certainly one which led from the west to the site of the capital, afterwards Petra. It was one which the advancing host, on its way to the ford of the Zered, would have to abandon after crossing the Ghor. The want of a beaten track would greatly increase the difficulties of travel, as well as take them through a waterless country. We find accordingly, that the next place of encampment was one which had no recognised name. There was again no water for the famished herds, and the thousands of travellers were wholly dependent on their water-skins. Little wonder that they called this place Oboth (= water - skins), and that it remained a memory of great sufferings endured both by man and beast.

Fifth Stage.

The fourth intermediate station, which took them to what is now the great Haj road, was variously named Iye-abarim (= the passages of the Hebrews) and Izim (Numbers xxi. 11 and xxxiii. 45). It lay a march south of the *Wady Hessi*, which by its name Zered is known to have been the boundary between Edom and Moab. A village, Ime, may still be found on the main road a few miles south of Zered. Here, doubtless, the overjoyed host saw the end of their sufferings, as they were now again in the track of caravans, and would go from water to water. We do not hear of any further hardships from this source.

Sixth Stage.

This was from the Passages of the Hebrews to the tributaries of the brook Zered, and the remainder of their journey to the plains of Moab is too well known to require recapitulation.

8. During all the travel in the wilderness and across the Arabah, south of the Dead Sea, the Ark of the Covenant had preceded the hosts of the Lord (Numbers x. 33); and not until it came to the banks of the Jordan was the order given that a space of 1,000 yards, or 2,000 cubits, was to intervene between the priests who bore it and the crowds of men, women, and children who followed.

The crossing took place on the 10th day of Nisan or Abib (= April), and four days afterwards the passover of the fortieth year was held (Joshua iv. 10, 14). The

parenthesis of Joshua iii. 15 is thus to be understood in the sense of the waters being low at the time of crossing, as it was only in Summer, when the snows of Hermon were melting, that its banks overflowed.

Having crossed the Jordan, the host under Joshua found itself in a new, unknown, and hostile land, with no cloud of light to guide it.

The first consideration was to find a place on which to pitch the sacred tent—a place which was undefiled by death, for 'whosoever in the open field toucheth one that is slain with a sword, or a dead body, or a bone of a man, or a grave, shall be unclean' (Numbers xix. 16). It was therefore necessary to alight upon some spot which should have been uninhabited of man, and of which the soil should have been undisturbed. Such a spot was found $4\frac{1}{2}$ miles west of the Jordan, and $1\frac{1}{3}$ miles east of Jericho (= *Tell Jiljûlieh*). Here the twelve stones, brought from the bed of the Jordan, were erected, not in a megalithic circle of a few yards in diameter, but as twelve boundary-stones marking out the circle (= the Gilgal), of which the camp was to consist. Within these limits was the 'clean place' (Lev. x. 14), within which the sacrifices might be eaten.[1] On the site described as *Jiljûlieh* are still some twenty-five mounds scattered irregularly over an area one-third of a mile wide.

Here, then, the Tabernacle was erected, and here it remained till the land had rest from war (Joshua xi. 23).

[1] 'In the East, at the present time, a sanctity is attached to the spot from which any holy place is visible.' Quoted by the late George Grove, in Smith's *Dictionary*, vol. ii. p. 388, n. *h*.

This was a period of at least seven years from the first occupation of Gilgal, as we know from the plea of Caleb the son of Jephunneh, who was 40 years old at the spying of the land and 85 at the time of his request, 38 of the intervening 45 years having been spent in the wilderness (Joshua xiv. 7–10). But Gilgal, as a once sacred spot, did not lose its sanctity while the kingdoms of Israel lasted, as is shown in the prophecies of Hosea and Amos.

9. The site of Gilgal was within the territory allotted to Benjamin, but it is not named as one of its cities, for the reason already given of its having been uninhabited. While the camp stood at Gilgal the all-important question arose as to the choosing of a site for the permanent location of the Tabernacle. No more deeply engrossing matter could have been debated, as any new site would necessarily become the spiritual capital of the twelve tribes. Unless counselled by the Urim and Thummim (Deut. xxxiii. 8), we may be sure there were those who advocated its retention at Gilgal. And when, possibly by divine appointment, a change was decided upon, the mutual jealousy of the tribes had to be met and overcome. The tribe of Ephraim had already shown signs of that autocratic spirit (Joshua xvii. 14–18) which ultimately led to the disruption of the Kingdom. As the heirs of Joseph's birthright, they claimed, from the first, pre-eminence in Israel, and to their territory it was determined to remove the tent.

This decision was based on military considerations as well as on ecclesiastical and civil ones. Seven years of

constant war had shown the Hebrews that their most formidable foes were the Philistines of the sea-coast. These remained unsubdued, and it was thought advisable to place the sanctuary of God on the eastern side of the terrain, and amid its largest and one of its most warlike tribes. Not only was this done, but the aristocratic Kohathites had their ten cities in the contiguous tribes of Ephraim, West Manasseh, and Dan. The Kohathites, like the other Levites, were enrolled for war at twenty years of age.

Further, the choice of a site was influenced by the fact that every adult male was required to attend the Tabernacle service at each of the three annual festivals. These included the two and a half tribes beyond the Jordan. If a glance at a map of the tribes be taken it will be seen that the site of Shiloh is about midway between Dan and Beersheba, and midway between Mount Gilead and Joppa.

The situation was not ill-chosen for the purposes of a contemplative faith, as well as for security in time of strife. No building had by any possibility brought death and desecration to the spot. Like Gilgal, it was virgin soil, as the choice of a name, taken from the blessing of Jacob, showed. The situation selected for the house of God is minutely given (Judges xxi. 19). It was north of Bethel (twelve miles), south-east of Lebonah (=*Lubban*, three miles), and four miles to the east of the great highway which then ran, and still runs, from Bethel to Shechem.

The distance of Shiloh from Gilgal is less than twenty

miles, and over these miles the Tabernacle and all its furniture was removed during the lifetime of Joshua. The now deserted site of *Seilûn* not impossibly presents much the same appearance as it did then. There are a few ruins and some reck-hewn sepulchres. The last lie outside the Taanath-Shiloh (= the circle of Shiloh, Joshua xvi. 6), which corresponded to the circle of Gilgal, and was formed by a complete circle of hills which surrounds the soft eminence where once stood the Tabernacle. Stanley characterizes the landscape as 'featureless,' and as being neither beautiful nor grand. So be it. Its glory was other than of earth. Through the two passages in the hills around, the thousands of Israel poured, amid scenes of joyousness and gaiety, for two or three centuries (Judges xi. 26). One of these rocky gates leads to the plain on the south, and to the great highway; the other, in the east, to the fountain, where the daughters of Shiloh gathered, then, as now, to draw water. Robinson pronounces this water to be of excellent quality. Like all other springs in the Holy Land, its volume has much decreased, owing to the deforesting of the country, though it is still abundant.

Being a new creation, Shiloh was neither a priestly nor a levitical city, and is not named as one of the towns of Ephraim, though the southern border of the country of Ephraim ran south of the circle of hills in which the basin of Shiloh stood. No events of striking national importance took place there while the Tabernacle stood. It was not intended that they should do so. It was thought enough that the sacrifices were offered and the

ritual of the Law observed. The fervour of earlier years, 'When thou wentest after me in the wilderness,' was lost, and there must have been some great ecclesiastical convulsion by which the High-priesthood was transferred from the elder branch of the house of Aaron to the younger. Of this the history says nothing. It records, in later books, the names of certain High-priests of the time of Joshua and the Judges. But these are only a selection, as between Phinehas, the grandson of Aaron, and the time of the prophet Samuel, a period of two centuries, the chronicler has preserved five names only (1 Chron. vi. 4–7, 50–53). Even these are not given in the histories of the time, and we derive them from post-Captivity documents. A fact such as this is one of evil omen for the characters of the men themselves. The Book of Judges, itself a record of heroes and heroic deeds for God, contains the name of no head of the Tabernacle worship, and no reference to the Tabernacle, if we except the rather scornful advice to the Benjamites to abduct two hundred daughters of Shiloh at the yearly passover-feast of the Lord, the two other feasts being apparently neglected. The age was one of disorganization, when every man did that which was right in his own eyes, and the power of law was lost. There is positive evidence to the same effect in the words, After the death of Joshua 'there arose another generation, which knew not the Lord, nor yet the work that He had wrought for Israel' (Judges ii. 10).

The Tabernacle daily services were doubtless observed after a perfunctory manner, but they would seem to have

had little effect upon the people, either to soften their manners or to raise their morals. The two gloomy appendices to the Book of Judges in chapters xvii., xviii., and xix.–xxi. are intended to set forth this aspect of the nation's character.

The nation was in imminent danger of apostacy from Jehovah. Sudden and unearned prosperity had fallen upon it, and they loved the creature more than the Creator — the gift more than the Giver. For its unfaithfulness the priesthood was changed, and when Samuel appears upon the scene, as a little lad, we find Eli, of the house of Ithamar, judging Israel.

10. Samuel was still a young man, when the accumulated wrath of offended Deity fell, in one heavy blow, upon both priest and people. War with the Philistines had broken out; an expression used by the conquerors, 'Be not servants to the Hebrews as they have been to you,' shows that the war was in the nature of a revolt, and had been preceded by some years of tribute and slavery on the part of the Israelites. The oppression having become intolerable, it was determined, by a combined effort of all the tribes, to throw off the Philistine yoke.

An army of thirty thousand footmen [1] (1 Samuel iv. 10) assembled at a spot near Beth-Shemesh, afterwards named Ebenezer. The Philistines had their camp in Aphek. This word is not here a proper name, as it has the definite

[1] These are the numbers of the text, but, like others, are given here as being subject to future correction.

article prefixed to it, i.e. *the* Aphek (= the aqueduct), the watercourse of the *Wady Ghŭrâb*, the valley above Beth-Shemesh, being intended. At the first engagement the Hebrews lost about 4,000 men, and the honours of war were with the enemy. A decisive battle now became imminent, and it was felt that nothing should be left undone to secure the nation's freedom. At a council of war held before the fight, the unprecedented proposal was made to fetch the Ark of the Covenant from Shiloh—30 miles distant. It came, and with it the two sons of Eli, who were its guardians. The proximity of the hostile camps is indicated by the fact that the Philistines heard the shouting which welcomed its arrival in camp.

The plain of *Sŭrâr*, still beautiful and fertile, was the probable scene of the previous engagement and of the one about to follow. The misplaced confidence of the Israelites is embodied in the words, '*It* shall save us out of the hand of our enemies.' It was no longer Jehovah, but the material ark that was the hope of the tribesmen and their Elders. So low had fallen the faith of Abraham's sons! To this act of national apostacy Eli must have been an acquiescent party. He was the High-priest, and without his permission the ark could not have been removed from Shiloh.

In what might be called the Battle of Beth-Shemesh the revolt was extinguished in blood. The ark was captured, Hophni and Phinehas dying in its defence. All organized resistance was broken down. Every Israelite fled to his tent, and the country was at the mercy of the invaders. Over what followed the Hebrew

historians draw a veil of silence. Shiloh is not mentioned, except as the place of Eli's death. Yet it is certain that it fell into the hands of the Philistines, and long centuries afterwards the prophet Jeremiah appealed to the voice of history to declare that this destruction was 'for the wickedness of My people Israel' (Jeremiah vii. 12). The fullest account of the shame, disgrace, and misery that followed on the sack of the little city within the limits of Ephraim, is contained in one of the Psalms of Asaph:—

'The children of Ephraim, carrying *slack* bows [*Ewald*],
Turned back in the day of battle. . . . .
They provoked Him to anger with their high places,
And moved Him to jealousy with their graven images.
When God heard this, He was wroth,
And greatly abhorred Israel:
So that He forsook the tabernacle of Shiloh,
The tent which He placed among men;
And delivered His strength into captivity,
And His glory into the adversary's hand.
He gave His people over also unto the sword;
And was wroth with His inheritance.

Fire devoured their young men;
And their maidens had no marriage-song.
Their priests fell by the sword;
And their widows made no lamentation.'

(Psalm lxxviii. 9, 58–64.)

11. In the presence of this patriotic reticence, it is impossible to say, from the evidence of the contemporary records, whether the sacred tent fell into the hands of

the Philistines. It is probable that it did not do so, but that immediately on the receipt of the news that caused Eli's death those who were in charge of it, hastily folding it together, moved it away. This would be done in the absence of the Ark of the Covenant (its most precious deposit), and by the direction of Samuel, as the sole remaining authority in Shiloh.

Soon the Philistine hosts would be on the spot, and the sack of the town ensued. No element of savage atrocity would seem to have been wanting to the occasion. Fired with fanatical hatred, stimulated by the possession of the ark, the conquering horde carried fire and sword through the little settlement, and razed Shiloh to a desolation from which it has never recovered.

Among those who escaped were Samuel and Ahitub, the latter the youthful son of Phinehas, and grandson of Eli (1 Samuel xiv. 3). The wreck of all the hopes and associations which clustered around the Tabernacle placed Samuel in a position of great responsibility and power. His word had already come to all Israel, and in the failure of the High-priestly power, whatever of law and of guidance remained was held by him.

His first act would seem to have been to re-erect the Tabernacle at Gilgal. It was here that, many years afterwards, he appointed Saul to meet him, in order to offer the burnt-offerings and peace-offerings of his consecration and coronation—sacrifices which could only be offered on the brasen altar before the Tabernacle. That this altar was that constructed by Bezalel, and that the tent which later stood in Gibeon was that made

by Moses, is affirmed in the text of 2 Chron. i. 3, 5. They could not, therefore, have fallen into Philistine hands at Shiloh.

The re-erected Tabernacle, in its old place in the plains of Jericho, stood there for many years. The note of time in 1 Samuel vii. 2 cannot be taken to refer to this, as the years there mentioned do not represent the time the ark was at Kirjath-Jearim, that time including the periods of Samuel's, Saul's, and part of David's reigns. They were rather the 'twenty years' in which the national spirit was gradually adjusting itself to the true relations which had formerly been established between Jehovah and His people. Under the wise and gracious rule of Samuel the house of Israel was drawn together after the Lord (*margin*, 1 Samuel vii. 2). Sorrow and suffering had effectually done their work, and the people were now willing to be guided into the heartfelt monotheistic worship on which their deliverance depended. When all was ready, and a spirit of humble trustfulness was seen to have penetrated the assembly, Samuel called a national convention at Mizpah, one of the three centres from which he judged Israel. The Mizpah here referred to is that mentioned in Joshua xviii. 25 as one of the cities of Benjamin, and is that now known as *Neby Samwîl*, five miles north of Jerusalem.

Here they were speedily attacked by their overlords the Philistines. As at Rephidim the intercession of Moses gained victory over the Amalekites, so here the prayers of Samuel prevailed. A great storm discomfited

the Philistines, and they were chased by the men from Mizpah till they came unto Beth-Car (= home of pasture), where probably their base-camp lay.

So critical an authority as Professor G. A. Smith places Beth-Car at *Ain Kârim*, four miles south-west of Jerusalem, where is a famous spring. The pursuit thus covered eight or nine miles, and the power of Philistia was broken. Doubtless some thousands of the enemy were slain, but of these particulars we are told nothing. What we are told is, however, of fuller significance. It is that the victorious army went to the scene of their former defeat, between Beth-Shemesh and Kirjath-Jearim, and there, on the very spot where the ark had fallen into the hands of its foes, they selected a great stone, already consecrated by sacrifice (1 Samuel vi. 15), which they called Ebenezer (= stone of help), and which, after the example of Jacob at Bethel, was anointed with oil. This was done in the spirit of humble gratitude, and as an acknowledgment that the event there celebrated, however dark it seemed at the time, was in reality the turning-point of the national fortunes, and the 'help' that Israel needed. Thus did they kiss the rod with which they had been smitten. No other action could have been so expressive of the change which had passed over the people in the intervening years.

The stone so set up is described as being 'between Mizpah and Shen.' This Mizpah (= watch-tower) is that mentioned as one of the cities of Judah in Joshua xv. 38, and is represented by the Arab village of *Deir el-Hawa*,

placed on the summit of a mountain south of the *Wady Ismaîl.* It is less than four miles east of Beth-Shemesh (here abbreviated to Shen). Midway between the two places is *Deir Abân,* a large village, in which stands a great rock bearing the name of *Deir Eban* (= Convent of the Rock). Previous to its consecration as a national memorial, it is mentioned as the great stone in the field of Joshua the Beth-Shemite, beside which the ark stayed when it returned from the Philistine cities (1 Samuel vi. 14). We are thus to understand the expression 'Samuel took a stone and set it' (1 Samuel vii. 12) in the sense of selection and appropriation, and not of actual elevation.

12. This act of public contrition was the turning-point of the national fortunes. During the lifetime of Samuel the Philistines came no more into the border of Israel.

The ark remained at Kirjath-Jearim, four miles east of Beth-Shemesh. The Tabernacle was at Gilgal, but without any officiating High-priest, Ahitub being under the ban pronounced on Eli's family. He was perhaps 15 years of age at the time Shiloh fell,[1] and, with his brother Ichabod, was the sole representative of the house of Ithamar. Samuel did not dare to recall to office the family of Eleazar, and yet the sanctuary of God could not be neglected. He himself was a Levite. In this emergency a son of Amariah, of the rejected family of

[1] The mention of his son Ahijah, as being in the camp of Saul soon after his assumption of rule, is an indication of the length of Samuel's judgeship (1 Samuel xiv. 3).

Eleazar, was called upon to act, not as High-priest, but as 'Ruler of the House of God.' His name was Ahitub, as was that of Eli's grandson, and he appears with this name and designation in 1 Chron. ix. 11, and Nehemiah xi. 11. He was the grandfather of Zadok, in whose person the family of Eleazar was restored to office.

How far the Tabernacle services at Gilgal conformed to the ritual of the law we may best judge by concluding that the duties of the High-priest remained in abeyance, but that the levitical and priestly duties were regularly performed under the direction of the ruler of the House of God.[1] Such were the maimed rites of Jahvism which followed the destruction of Shiloh.

[1] In later times we find that Azariah V. was High-priest in the reign of Hezekiah (2 Chron. xxxi. 10), and also 'ruler of the House of God' (verse 13). As such he co-operated with Hezekiah in appointing certain men to be over the storehouses of dedicated things. It would appear that the two offices were distinct, but might be held by the same person. In the history of Jeremiah (xx. 1) there is mention of a certain priest named Pashhur, who was 'chief officer in the house of the Lord.' We have here an instance of the same or a similar office being held by a man who was neither High-priest nor the son of a High-priest, as he belonged to the course of Immer. If the two offices were the same, this was an irregularity, owing to the disorganized state of public affairs.

CHAPTER II.

TO THE BUILDING OF THE TEMPLE.

THE Tabernacle being re-erected at Gilgal, and the Ebenezer rock being consecrated as a memorial, the Twelve Tribes entered upon a career of peaceful development. Samuel was the one man to whom the whole nation looked. As a Levite he had no special duties in the House of God. The courts held at its East Gate were principally for the settlement of cases of ceremonial purity, and were presided over by Levites and priests. There were, however, many other 'hard cases' of civil and criminal law, corresponding to those brought before Moses by the advice of his father-in-law (Exodus xviii.).[1] These were appropriately brought before Samuel, who, like Moses, was a Kohathite Levite. These courts were not always held at Gilgal, but at Bethel, Gilgal, and Mizpah, to each of which places an annual visit was paid. The selection of two centres for the administration of justice other than that at which

[1] The difficulty as to the names in this family may be met by adopting Ewald's suggestion that 'Jethro' signifies prefect, and was a title held by Reuel, who was the father of Hobab (Numbers x. 29). In this way Hobab would be the brother-in-law of Moses, as is stated in Judges iv. 11, and Moses the son-in-law of Jethro, as written in Exodus iii. 1. Jethro returned to his own land (Exodus xviii. 27), but Hobab accompanied the host (Judges iv. 11; 1 Sam. xv. 6). Later scholarship suggests that *both* were the Arabian names of Moses' father-in-law.

the Tabernacle stood, was in itself a new departure in the history of Hebrew jurisprudence, which could only have been justified by the revelation of the Urim and Thummim, as declaring the will of God. Bethel was, however, associated with the vision of God given to Jacob, and Mizpah with the remarkable interposition which had so lately given liberty to the nation. To the Hebrew any spot at which Jehovah had manifested Himself became, by that act, for ever sacred. It may thus have been thought that the sanctity of these two places was equal to that of Gilgal, where the Captain of the Lord's host had appeared to Joshua (Joshua v. 13–15).

1. As the years passed, and Samuel grew feebler, he made his two sons judges over Israel. A name has probably dropped out of the Hebrew text of 1 Samuel viii. 2, as it is hardly likely that both judges should have been stationed in far-south Beersheba. Josephus' paraphrase of the history has retained the second name, which is Bethel (*Antiquities*, vi. 3, § 2).

While doing this Samuel took a step far in advance of anything yet done in the way of liberalizing and delocalizing the institutions of Mosaism. It was nothing less than the building of an altar at his own home in Ramah, which he felt less and less able to leave. This was the less revolutionary as there was no ark at Gilgal before which to burn incense.

There were many Ramahs (= heights) in the land. Nearly every division of the tribes had a place so named. Among these were—

(1) Ramah of Benjamin (Joshua xviii. 25).
(2) Ramah of Ephraim (Judges iv. 5).
(3) Ramah of Naphtali (Joshua xix. 36).
(4) Ramah of Asher (Joshua xix. 29).
(5) Ramah (or Ramoth) of Gad (2 Kings viii. 28–29).
(6) Remeth (Joshua xix. 21) or Ramoth of Issachar (1 Chron. vi. 73).

It would be in harmony with these examples that in the hill country of Judah there should be a spot so named, the distinction between Gibeah, a hill, and Ramah, a height, being, that an isolated hill might be found on comparatively low-lying ground, but a Ramah is to be sought for only on elevated land.

In the 115 place-names given in the Book of Joshua as belonging to the division of Judah, the name of Ramah does not occur—except as a descriptive or alternative name for Baalath-beer (Joshua xix. 8), where it is distinguished from all other Ramahs as Ramah of the Negeb. This, however, would not prevent the name being given to a suitable spot which was colonised or inhabited after the conquest. Such would seem to have been the history of the Ramah in which Samuel was born, and where he died and was buried, as it probably was of some of the other Ramahs, several of which are unmentioned by Joshua.

2. Two and a half miles north of Hebron, the road to the north, having crossed the plain of Mamre, climbs

a gentle ascent of three hundred feet. That gained, the traveller finds himself in the saddle of an old Roman road, still roughly paved, with a slight hilly projection on either side. That to the left is 3,340 feet and that to the right 3,370 feet above the level of the Mediterranean. These are the two Ramahs contained in the plural word Ramathaim. Robinson found the name Ramah still in use here, disguised in the Arabic *er-Râmeh*.

From this point the northern horizon falls gradually away, till at Jerusalem it is nearly a thousand feet lower (= 2,593 feet). To the south a similar decline is perceptible, and with the exception of the hill on which Jutta stands (3,747 feet), the altitude of these twin heights is not attained within 100 miles west of the Jordan.

Through a cleft in the hills the waters of the blue Mediterranean are seen. Within an hour's walk of this Ramah is the ancient city where the three Patriarchs and their wives, except Rachel, were buried. Around these tombs sprang up the city of Kirjath-Arba, after its conquest called Hebron (= association).

Josephus says that it was the oldest city in Palestine, and it was visited by the spies sent by Moses to inspect the land (Numbers xiii. 22). It was taken by Joshua (Joshua xiv. 12 and xv. 14), and owing to its great reputation, as the last resting-place of Abraham, Isaac and Jacob, special provision was made for its security. It was made a city of refuge, and given, with its suburbs, as a residence for the priests and the Kohathite Levites (Joshua xxi. 10–13), being the only city thus jointly occupied. The

suburbs, forming a circle around the city of one or two thousand cubits (= 500 to 1,000 yards), (Numbers xxxv. 4–5),[1] were given to the clergy. The fields of the city and its villages were given to Caleb. There can be no doubt that this was done, so as to doubly and trebly secure the sepulchres of the ancestors of the race.

It is impossible to do more than to establish in a general way a connection between the Kohathite settlement in and around Hebron, and similar settlements in the division of Ephraim, of which there were four (Joshua xxi. 21–22). Of these the principal was Shechem, described as being in the hill country of Ephraim, which, like Hebron, was one of the three cities of refuge on the west of Jordan.

3. There were twenty generations from Jacob to Samuel (1 Chron. vi. 33–38). Some time during the period of the Judges, Zuph or Zophai, an Ephraimite Levite of the sons of Kohath, migrated from the northern to the southern settlement of his clan. He settled on the then bare and stony highland to the north of Hebron, which from his occupation of it came to be known as the Land of Zuph, or Ramathaim-Zophim (= double high-place of Zuph), (1 Samuel i. 1 and ix. 5).

[1] A distinction was made between walled and unwalled cities. In the case of the former the suburbs or pasture-fields were to be 1,000 cubits from the wall of the city round about. In the smaller and unwalled villages, the 'suburbs' were to be 2,000 cubits on every side, *measured from some central point* in the hamlet, around which the houses were grouped. Disputes would thus be of rare occurrence. These Levitical pasture-fields were inalienable (Lev. xxv. 34).

His descendants in the direct line are given in 1 Samuel and 1 Chronicles in the following genealogies:—

1 Samuel i. 1.	1 Chronicles vi. 34.
Zuph.	Zuph or Zophai (v. 26).
Tohu.	Toah or Nahath (v. 26).
Elihu.	Eliel or Eliab (v. 26).
Jeroham.	Jeroham.
Elkanah.	Elkanah.
Samuel.	Samuel.

It would thus seem that the migration took place five generations, or less than two centuries, before the birth of Samuel. His childhood was spent at Shiloh, but as the meridian of life passed, and its main activities were left behind, he retired to the city of his fathers, 'for there was his house.'

Here 'he judged Israel.' But he did more. 'He built there an altar unto the Lord' (1 Samuel vii. 17). In doing this Samuel followed the example of Abraham, and did not deem that he was contravening the law against the building of private and unauthorized altars.

The erection of this altar, on one of the high-places of the land, did not involve the duplication of the Tabernacle, or any part of it. What it did involve was that the altar should stand within an enclosed space, to correspond with the outer or eastern court of the Tabernacle. Also that provision should be made for the sacrifice of animals by duly ordained priests and Levites.

As parts of every burnt-offering were washed, and the officiating priests required frequent ablutions, every altar of Jahvism required an abundant supply of water. These were the prime necessities of the case, when once the erection had been decided on.

As the laws of Moses, administered by Samuel, comprised an ecclesiastical, a civil, and a criminal code, and, in many cases, required that restitution should be made both to the complainant and to the ordinances of religion, an altar, where such sacrifices and sin-offerings could be received, became a necessity of every supreme court of justice.

The object and application of law amongst the Hebrews was not solely to secure that even-handed justice should obtain between man and man, but also that every transgressor should be purged of his sin by sacrifice; and, by penitence and prayer, should obtain the Divine forgiveness.

In the case of minor courts, one of which was held in every Levitical city and town, the convicted defendants were sent to the central sanctuary to attain these ends. A general clause to cover all such cases was that of the national sacrifices, constantly offered, and of the institution of a great day of Atonement for the whole nation.

Samuel, not unwisely, judged that by the erection of an altar, near to himself as the fountain of justice, he would be forwarding the best interests of his people and of true religion amongst them.

The existence of this altar, a few miles from Hebron, was without doubt a chief cause of David's choosing

Hebron as the capital city of his kingdom, till the conquest of Jerusalem. With his departure it was probably removed, the enclosure-walls remaining. These would remain undisturbed during the whole period of Jewish national life, as having once been employed in the worship of Jehovah. Their partial removal would thus date from times subsequent to the fall of Jerusalem under Titus. The tradition of some unusual sanctity still survives amongst the peasantry of the neighbourhood, who name this ruin *Râmet el-Khŭlîl*, the hill of the Friend, i.e. Abraham.

4. Dr. Edward Robinson twice visited *er-Râmeh*, at an interval of fourteen years. His first account, written in April, 1838, contains the following description :—

'At one hour from Hebron, a blind path went off to the right, at right angles, leading to Tekoa; and on it, almost five minutes walk from our road, are the foundations of an immense building, which excited our curiosity. We found the substructions of an edifice, which would seem to have been commenced, but never completed. They consist of two walls, apparently of a large enclosure, one facing toward the south-west, two hundred feet long; and the other, at right angles, facing north-west, one hundred and sixty feet long, with a space left in the middle of it, as if for a portal. There are only two courses of hewn stones above ground, each 3 feet 4 inches high; one of the stones measured 15½ feet long by 3 feet thick. In the south-west angle is a well or cistern arched over, but not deep. There are no stones or ruins of any kind lying around, to mark that the walls were ever carried higher. . . . . The spot is called by the Arabs *Râmet el-Khŭlîl*' (*Biblical Researches*, vol. i. p. 215).

In May, 1852, Dr. Robinson again visited the spot, approaching it from the north, and wrote as follows:—

'Rising gradually, we turned at 4.15 to the left at a right angle; and came, in seven minutes, across the fields, to the immense foundations we had formerly visited. . . . Those inexplicable walls remain as when we saw them in 1838, except that the covering to the well was gone. This well is of large circumference, and about 10 feet deep to the surface of the water. It is said to be strictly a fountain. The course of the longest wall is south, 80° east.

'The foundations are regarded by the common people as belonging to the ruins of *er-Râmeh*, which cover the hill to the north, and extend down to this spot.

'We now turned up the hill *er-Râmeh*, and reached the top in six minutes. Here and on the slope are the remains of a large village. The ground all the way is strewn with ruins of dwellings covering some acres, with hewn stones among them. There is on the top a cistern excavated in the rock. . . .

'In respect to the immense walls, which form the most imposing feature of the place, I find as yet no satisfactory explanation. . . .

'They exhibit none of the tokens of ecclesiastical architecture, and do not of themselves suggest a church. . . .

'We left *er-Râmeh* at 4.45, descending the hill toward the north. At the foot was an excavated cistern, now dry, with steps to descend into it' (*Biblical Researches*, vol. iii. pp. 278–281).

In furtherance of the suggestion that we have in these walls, lying below the ancient town, the remains of an enclosure built by Samuel around an altar, I may remark:—

(*a*) The measurements coincide with those of the ancient cubit. The stones of the walls are given as 40 inches in thickness, or $3\frac{1}{3}$ feet. This was three

building cubits of $1\frac{1}{5}$ feet = $3\frac{3}{5}$ feet. The walls were thus six cubits high, the curtains of the tabernacle enclosure being five.

(*b*) The two remaining walls are in length 160 and 200 feet respectively.[1] These are outside measurements. Hebrew surface measures are uniformly interior measures, taken with the large cubit. We may thus conclude that, as at Sinai, the space enclosed for the worship of the people around the altar was a square. This would be a square of 100 cubits (= 150 feet), whereas that was a square of 50 cubits.

The precedent would doubtless be followed of a portion of the altar-platform being placed to the west of the altar, adjoining which was a laver with water. To these purposes 30 cubits (= 45 feet) would seem to have been allocated, though it may have been one-third the length of the eastern court, or $33\frac{1}{3}$ cubits (= 50 feet).

(*c*) The enclosed spring and cistern within the enclosure lie in the south-west angle. This is in the true position for sacrificial purposes, as, in the Temples of the Jews, the water supply was always placed on the western side near the north gate.

(*d*) The corrected course taken by the longer wall is within four degrees of due east. As, however, the sun apparently rose southward in the latitude of Ramah, and no scientific instruments were in use, the error in orientation would thus arise.

[1] According to Sir Charles Warren, 200 by 165 feet. If the thickness of the walls be added, the measurements will be $218\frac{2}{5} \times 164\frac{2}{5}$ feet.

The walls were so built as that worshippers standing within them should have their backs to the rising sun. This was essential. The oblong rectangle rightly lies from east to west.

(*e*) The opening in the west wall—if there were one, which is doubtful—had nothing corresponding with it in the tabernacle enclosure. This is accounted for by the fact that there was no second court to the west at Ramah, as at Shiloh, and that this opening would be for the sole use of the officiating priests and Levites from the neighbouring city of Hebron.

(*f*) The hewn stones found in the village higher up the hill were possibly carried off from the two walls, though Mr. G. A. Murray, of Hebron, suggests that the removed stones may have been taken to form the first enclosure built around the Cave of Machpelah. This use of them would not have been deemed a desecration. The foundations of these walls, when found, will probably show a large gate opening on the east side, and another on the north, opposite to the line of the altar.

(*g*) The Haram walls of Jerusalem and Hebron are largely Phœnician in character. The fact that the walls at *er-Râmeh* resemble them in character of masonry is in favour of their being early Israelitish work. The fact that there are no hewn stones or ruins of any kind to show that the walls were ever carried higher is a point of cardinal importance, as fixing the use for which they were built. That use, it is suggested, was to screen an altar within the enclosure, as the hangings of the tabernacle courts screened its altar

from curious and irreverent eyes. If this was their purpose, that altar could only have been the one built by Samuel.

5. Happily we are in a position to test the foregoing suggestion that the ruins of *er-Râmeh* are those of the ancient Ramah of Samuel, by an appeal to contemporary evidence of unimpeachable authority. We have in chapters ix. and x. of 1 Samuel an account of a visit to Ramathaim, which contains many topographical details. These we may compare with Dr. Robinson's description of the site.

The following are the principal coincidences between the two, but there may be others which a more complete examination of the site would afford.

(*a*) On the fourth day after leaving Gibeon, or the estate at Zelah near to it, Saul and his servant approached Ramah before the hour of the evening meal. They were 'in the land of Zuph,' and, as an afterthought, it was determined to consult the seer, Samuel. As they ascended the hill on the north side of the city they met women going to draw water from the 'excavated cistern,' which Dr. Robinson noticed at the foot of the hill.

(*b*) Leaving them, the two men ascended the hill, not by the way of the Roman road, but by a path which led directly to the crest of the hill before them. Here lay a large village, all the way from the crest of the hill to the stone-enclosure being now strewn with ruins of dwellings.

The travellers, having crossed the peak and come within the city, met Samuel on his way to the high-place.

(*c*) It was 'in the gate,'[1] i.e. the gate leading to the high-place south of the city, that Saul addressed Samuel. The result was that together they went to the guest-chamber which lay within the enclosure—Jewish sacrifices of peace being usually eaten in the precincts of the sanctuary.[2]

(*d*) The feast over, Saul accompanied Samuel to his home in Ramah—the expression 'came down' (verse 25) having reference rather to the dignity of the high-place than to the comparative altitudes of the city and the altar.

(*e*) The next morning[3] Samuel, accompanied by Saul, went out, 'going down to the end of the city.' We gather from this, as from the first meeting of Samuel and Saul, that the house of the former was in the city and *above* the place of the altar. From this it would appear that Saul was privately anointed, as was fitting, in the neighbourhood of the altar, and did not leave the city by the way he had entered it. It will be remembered that Dr. Robinson walked from the main road to the 'immense foundations' in seven minutes, and from them to the top of the hill in six minutes. As the position of Samuel's home is unknown,

[1] This does not necessarily mean that the city was surrounded by walls. Hebron still has gates at the ends of its streets, but has no surrounding wall.

[2] The word used for 'guest-chamber' also occurs, as descriptive of a part of the Temple, in Jer. xxxv. 2, 4, and Ezek. xl. 17. In these and other passages a sacrificial dining-room is meant. Such rooms were required by the ordinance of Lev. vi. 16, 26, and were built as a part of every temple.

[3] Samuel is said to have summoned his guest 'about the spring of the day.' As the morning sacrifice was always killed before sunrise, and Samuel would attend this, the probability is in favour of their having gone together to the altar.

the time generally taken to cover the distance of this early walk was probably less than fifteen minutes. It is not stated that Samuel accompanied Saul to the junction of the roads, though he probably did so, as a token of respect to his future sovereign.

(*f*) Other confirmations of the identity of *er-Râmeh* with Samuel's Ramah are to be found in the fact of David's having fled from the court of Saul to Samuel (1 Samuel xix. 18). As the Ramahs of Benjamin and Ephraim were situated close to Gibeon, it is unlikely that David would find any safety in places so few miles away from his enemy, or that he should expect it. There is positive evidence to the contrary in the fact that Saul himself went toward Ramah, and at the great well that is in Secu made inquiries for Samuel and David, having previously been told that they were living at Naioth in Ramah. Naioth is the word used in Psalm xxiii. 2, where it is translated 'pastures.' It is here, probably, a descriptive noun, and not a proper name. Had it been so, Saul, when at Secu, would not have needed to inquire where the 'pastures of Ramah' were. He did so, and went to Naioth, or the pastures, with the result that, while he prophesied, David escaped.

In this case the whereabouts of the great well of Secu is a prime factor, in deciding which of the many Ramahs is meant as that of Samuel's home.

The plain of Mamre, to the immediate north of Hebron, is drained by the brook Eshcol, running to the south-west. Between two arms of the brook is a famous well, fed by a spring within. The former is known as the

Sirah Well (2 Samuel iii. 26), and the latter as *Ain Sürâh*. In this pleasant vale, with its orchards and vineyards, we have the well Secu, beside which Saul rested, as Abner afterwards did. It is not more than three or four miles either from *er-Râmeh* or from Hebron. It is possibly one of the springs of Caleb (Joshua xv. 19).

6. The narrative before us yields, not only these rich fruits of topographical interest, but others equally welcome in the department of geography.

(*a*) In the opinion of the late Dean Stanley the situation of Samuel's Ramah and its allied questions is 'the most complicated and difficult problem of sacred topography.' It will have become evident that it is so solely in the refusal to accept as Ramah Mr. Walcott's and Mr. Van de Velde's *Râmet*, a little north of Hebron. When further scriptural evidence is adduced it will be found that there is in this no variance with the existing localities.

Speaking to Saul in the gate of his city, Samuel told him that he would find two men by Rachel's sepulchre in the border of Benjamin. The site of this tomb is undisputed. It stands beside the road about one mile north of Bethlehem.[1] The boundary between Benjamin and Judah thus ran between the two, the territory of the

[1] Bethlehem was a city in the division of Judah. The name first occurs in Judges xvii. 7, where it is termed Bethlehem-Judah. Its 'father' or founder was Salma, a son of Nahshon, first prince of the tribe of Judah (1 Chron. ii. 51). It was thus occupied immediately on Joshua's conquest of the land, though it does not find a place in Joshua's record of the cities of the land.

former being extended, in a wedge-shape, just far enough to include the tomb of their great ancestress. It is, if possible, a still more inevitable deduction that the 'land of Zuph' (1 Samuel ix. 5) lay to the south of Bethlehem-in-Judah. As Saul was a Benjamite, the speech of the two men he was to meet at Zelzah was to be an indication of the coming supremacy of 'little Benjamin, their ruler.'

That Rachel's tomb remained a well-known spot for centuries after this, we know from the prophetic utterance of Jeremiah (xxxi. 15), the Ramah mentioned by him here not being the same as that of chapter xl. 1.

The first Evangelist, Matthew, though a Galilean, could have had no misgivings as to the contiguity of Rachel's tomb with Ramah, and of both with Bethlehem (which lay between them), as he cites the verse of Jeremiah and connects it with Bethlehem and 'all the borders thereof,' *er-Râmeh* being twelve miles off (Matthew ii. 16–18). At this time the tomb was only a pyramid of stones with a cave beneath, which was its appearance so late as the seventh century A.D.

(*b*) As Saul went northward to Gibeon from Rachel's tomb, he would pass to the west of Jebus, even then called Jerusalem,[1] and was told by Samuel that when he came to the Gibeah-of-God a certain thing would happen. In Samuel's mouth this name could hardly apply to any other place than Mizpah (= *Neby Samwîl*), (at the foot of which his most direct path lay), as it was there that God had so lately come to the help of his people against the Philistine army. Its connection with

[1] As shown by the *Tel el-Amarna* tablets.

the subject of this chapter lies in the fact that it had become a *bamah* or high-place, and that a procession of musicians coming from there was joined by Saul, who, meeting them at the 'Ir' enclosure, accompanied them to another high-place, probably that at Gibeon, 1½ miles away. These Israelitish high-places were a copy of heathenism, being based upon the material idea that worshippers standing on them were nearer to the seat of the God or gods than when on lower ground. In contrast with this it may be noticed that the sites chosen for the Tabernacle were never those of hill-tops. Gilgal was on a plain, Shiloh on a gently-rising slope, and even Moriah was surrounded by hills higher than itself. Ramah, as we have seen, lay below the town in which Samuel lived, and Gibeon may have been on a plain.

In the identification of *er-Râmeh* of Judah with the Ramah of Samuel, we also recover the 'Arimathea' of Joseph, the Sanhedrist, who begged the body of Jesus and laid it in his own tomb. Arimathea was still 'a city of the Jews' (Luke xxxii. 51) at the time of the Crucifixion. It is now quite deserted.

7. The altar at Ramah was in use when Saul was privately informed of his coming election as King. A national assembly held shortly afterwards, for the selection of a king, showed that Mizpah (= *Neby Samwîl*) was the central meeting-place of the Tribes; while Samuel's instruction to Saul to spend seven days at Gilgal in preparation for the public recognition of him as God's vicegerent, showed that the Tabernacle

now stood there. A great change was, however, imminent. This was no less than the final abandonment of Gilgal as the site of the Tabernacle. It were vain to attempt any categorical reason for this action. Not unlikely it was done at Saul's instigation, and as a step toward the attainment of a purpose which he, later, carried out. Saul's attitude toward the priesthood was uniformly one of hostility and even contempt. He had usurped the priest's office at the service of his own consecration (1 Samuel xiii. 9). He had, as a consequence, alienated from himself the friendship of Samuel, whose life he threatened (1 Samuel xvi. 2). More was to follow.

The result, however, was that, after the final breach with Samuel (1 Samuel xv.), we next hear of the Tabernacle as being at Nob. As is so frequently the case in the records of those days, deeds that were revolting to the conscience of the writers are passed over without mention. Doubtless Saul found Gilgal, in the eastern limit of the land, inconvenient as a place of rendezvous for the militia of the people, and injurious to the military operations in which he was constantly engaged (1 Samuel xiv. 47), as his attendance was sometimes requisite there. It is not until the breach with Samuel had been followed by that with David, that we find the High-priest Ahimelech (son of the Ahitub who, forty years before this, had been rescued from the burning of Shiloh) officiating at Nob. He seems to have been a man without any real dignity of character or pride of office, just such a one as would

surrender everything to the hectoring of Saul, of whom he lived in craven fear. *He* probably removed the Tabernacle to Nob.

8. Four miles to the north of Jerusalem, and at the distance of a quarter of a mile to the east of the main road, is a curiously knobbed and double-topped hill, named by the Arabs *Tell* (or *Tuleil*) *el-Fûl*. The crown of this hill is 30 feet higher than Mount Zion, and Jerusalem can be plainly seen from it. On its top is a large pyramidal mound of unhewn stones, which Robinson supposes to have been originally a square tower of 40 or 50 feet, and to have been violently thrown down. No other foundations are to be seen. At the foot of the hill are ancient substructions, built of large unhewn stones in low massive walls. These are on its south side, and adjoin the great road.

If we take the scriptural indications as to the site of Nob (= height), this hill and these ruins fulfil all the conditions of the case.

(*a*) Nob was so far regarded as belonging to Jerusalem, as one of its villages (thus involving its proximity), that David's bringing Goliath's head and sword to the Tabernacle at Nob was regarded as bringing them to Jerusalem (1 Samuel xvii. 54).

(*b*) A clearer indication as to its situation is, however, gained by the record of the restoration towns and villages in which Nob is mentioned, the name occurring between those of Anathoth and Ananiah (Nehemiah xi. 32). These two places still bear practically the

same names, and their sites are well known. In the narrow space between *Anâta* and *Hanîna* stands the hill of *Tell el-Fûl*, which we take to be the ancient Nob.

(*c*) Another indication is contained in Isaiah's account of Sennacherib's march on Jerusalem, the picturesque climax of which is, 'This very day shall he halt at Nob; he shaketh his hand at the mount of the daughter of Zion, the hill of Jerusalem' (Isaiah x. 28–32). There are only two hills on the north from which the city can be seen, so as to give reality to the poet's words. One of these is *Neby Samwîl*, the other *Tell el-Fûl*. Like Pompey in after centuries, the Assyrians approached Jerusalem from the valley of the Jordan, and not by any of its great roads. The evidences of this are to be found in the list of places given in the preceding context of the verse in which Nob is mentioned. These, with their modern equivalents, are:—

(1) Aith, . . . now *Khân Haiyân*, 1 mile south-east of *et Tell* (= Ai), which is one mile north of Michmash.

(2) Migron, . . . (= precipice), now *Makhrûn*, a little east of Bethel.

(3) Michmash, . . . modern village of *Mûkhmâs*, north of the Eastern Gibeah (*Jeba*).

(4) 'The Pass' . . . Compare 'the pass of Michmash' (1 Sam. xiii. 23).

(5) Geba, . . . (= *Jeba*), 2 or 3 miles south of Michmash, with the *Suweinît* gorge between.

(6) Ramah, . . . (= *er Râm*), between 2 and 3 miles west of Geba (= *Jeba*).

(7) Gibeah of Saul, . . . = Gibeon, now *el-Jîb*, 3 miles to the west of Ramah of Benjamin (= *er Râm*).

(8) Gallim, . . . (= heaps), birthplace of Phalti (1 Sam. xv. 44), unknown.

(9) Laishah, . . . a ruin named Adasa, east of Gibeon.

(10) Anathoth, . . . village of *Anâta*, 5 miles north-east of Jerusalem.

(11) Madmenah, . . . (= dung-heap), unknown, possibly a suburb of Jerusalem.

(12) Gebim, . . . (= the trenches), unknown, possibly defensive works on the north side of Jerusalem.

The outstanding military facts of the five verses in which these names occur are that Sennacherib had laid up his baggage at Michmash, the pass being impossible for vehicles, and had moved on to Nob with a part of his army (the main body being at Geba), from the top of which he was 'on that very day' to shake his fist at Jerusalem.

Mizpah is not mentioned. It lay off the line of march, and may have had no settled population.

(*d*) An examination of the three books of the Bible in which Nob is mentioned leaves us no ground for seeing it in *Neby Samwîl*. If Mizpah be in this way excluded, the only other claimant to the position is *Tell el-Fûl*.

David was 30 years of age at the time of Saul's death.[1]

[1] Saul was an old man at the time of his death. Two lines of argument lead to this conclusion. One, that his fourth son, Ish-bosheth (1 Chron. ix. 39), was 40 years old when he was set upon the throne (2 Sam. ii. 10). The

He was thus still a young man when he called at Nob and obtained Goliath's sword. Shortly afterwards, during the lifetime of Saul, the Tabernacle was removed to Gibeon. During the few years in which it stood at Nob it would hardly be likely to have been placed on the top of the hill. We have seen that such situations were alien to the spirit of the new faith. Its place must thus be sought at the foot of the hill, where are the low massive walls and ancient substructions of unhewn stone, remarked by Robinson. No dimensions of these walls are available. Their height, thickness, and length remain as yet unrecorded, together with the size of their enclosed areas and aspect. With the key of the cubit in our hand we may be able to decide as to their probable origin and history, so soon as the required data are before us. Then may be expected to close another chapter in the elucidation of the memorable sites of the Holy Land.

9. The episode of the High-priest Ahimelech's giving Goliath's sword to David at Nob is one that was pregnant with consequences to all the parties concerned in it. It

other, that by the true interpretation of 1 Sam. xiii. Saul's popular election as king took place one year after his anointing by Samuel, when he became king *de jure*. Two years after his election war with the Philistines broke out, in which Jonathan greatly distinguished himself. He could not have been less than 18 years of age at this time, his father, Saul, being possibly 20 years older. This was in the fourth year of his reign, when he was about 38 years of age. The length of his reign is nowhere given, but it was not short. The reading in the margin of 1 Sam. ix. 2 is therefore to be preferred, in which Saul, at the time of his election, is spoken of as 'choice' rather than as 'young.'

gave to the tyrant Saul the opportunity of carrying out a half-fulfilled purpose which he must, for a long time, have secretly cherished. To learn what that purpose was we must, for a moment, look at the relations in which the family of Saul stood to their ancestral city, Gibeah-of-Saul, more commonly known as Gibeon.

We have, in the first book of Chronicles, genealogies, rewritten after the return from the Captivity, in which the descent of the two houses of Saul and David are minutely traced.

Six verses of chapter viii. (vv. 33–38) trace the family history from Ner, the father of Kish, and grandfather of Saul, to those descendants of the ex-royal family who returned from the Babylonish captivity. These particulars are repeated in chapter ix. (vv. 39–44), and are an illustration of the composite character of the book. In each of these texts are verses preceding them, practically identic, in which the family history is given as far back as the records went. They so far supplement one another as to tell us that a certain Jeiel, whose wife's name was Maachah, was the 'father' of Gibeon. This joint genealogy furnishes a line of fifteen generations, and dates from some period anterior to the elevation of Saul.

What is meant by the 'father' of a city is a position which cannot be reproduced—hardly understood—in our Western social life. The soil out of which the office grew was the patriarchal one, by which the family, the sept, and the clan were governed by its eldest and most honoured member. When the change from a pastoral

life into that of an agricultural one was complete, and communities were formed in villages, towns, and cities, the same social instincts prevailed, and the 'father' of the little group of households became an hereditary office, transmitted from father to son.[1] Thus the office of 'father,' in the once Gibeonite town of Gibeah, was retained in the family of Matri, and descended to Saul. The family inheritance was at Zela, in the county of Benjamin, where also was the family sepulchre (2 Samuel xxi. 14). Zela is mentioned in Joshua xviii. 28, next to Eleph (= *Lifta*), and was probably not far from Gibeon, but no trace of it has been found.

Holding this local honour in the family, and elected King over all Israel, Saul determined to make Gibeon the seat of government for the country and the spiritual capital of the new kingdom. To this end the transfer of the Tabernacle from Gilgal was one step. The erection of Samuel's altar at Ramah was another, as it withdrew a large amount of influence from the recognised place of sacrifice for the twelve tribes. The death of Samuel about this time (1 Samuel xxv. 1), and the incident of the sword of Goliath, gave Saul the opportunity he had long waited for. Sending for Ahimelech, the High-priest, and all the priests that were in Nob, to some height adjoining Gibeon, he had them foully murdered before his eyes. He did not fear to lift up his hand upon the

[1] The *title*, however, would seem to have been retained in the records only to those fathers who were the first of their line, or the founders of cities. In such cases as those of 1 Chron. ii. 42–52 and iv. 4–5, in which Canaanite towns are mentioned, the 'father' of each is to be understood of its *first* ruler or patriarch.

Lord's anointed. This was but a part of his crime. He sent his executioners to Nob, and there destroyed all the dedicated servants of the Tabernacle, Abiathar alone, as a priest, being allowed to escape.

At the same time he began a war of general extermination against the Gibeonite hewers of wood and drawers of water for the Tabernacle. We catch a glimpse of this act of uncalled-for ferocity in the statement that the Beerothites fled to Gittaim (2 Samuel iv. 3). Beeroth was one of the four Hivite cities that drew Joshua into a treaty of peace, and by the destruction of all their heathen inhabitants Saul hoped to purge Gibeon and the land of its foreign element, and to secure around the Tabernacle, when re-erected, only men of the race of Israel (2 Samuel xxi. 2, 5). We know how this series of monstrous crimes was expiated in the reign of David, by the death of seven of Saul's descendants, who were hanged in Gibeah-of-Saul, i.e. Gibeon.

Before that day came, however, the Tabernacle was removed to Gibeon, and the policy of blood and sacrilege seemed to prosper.

10. In the original grant of fourteen cities to the tribe of Benjamin, three had different forms of the same name (Joshua xviii. 21–28), two of which were priestly cities. These are given as Geba, Gibeon, and Gibeath, but their sites have been recovered, and they may be distinguished as *Jîbia*, the place of the northern Gibeah; *Jeba*, the site of the eastern Gibeah; and *el-Jîb*, the village of the southern Gibeah, or Gibeon.

The former city of the Hivites was not only the largest of the three, but played a more prominent part in the history of the country than either 'Gibeah of Benjamin' (= *Jeba*) or the Gibeah lying in the north angle of the territory of Benjamin, a few miles south of Shiloh,[1] now known as *Jîbia*. In addition to the confusion caused by this similarity of names, the word Gibeah is often used in the English Bible (both versions) as an appellative, and not as a proper name, e.g., Abinadab is said to have lived in the Gibeah of Kirjath-Jearim (2 Samuel vi. 3), and Saul is described as sitting in Gibeah, under the tree in Ramah (1 Samuel xxii. 6).

The identity of the village of *el-Jîb* with the site of Gibeon is practically beyond dispute. 'The pool of Gibeon' (2 Samuel ii. 13) and 'the great waters that are in Gibeon' (Jeremiah xli. 11) are still represented by a large stone tank or reservoir, 100 × 120 feet, supplied by a spring which rises in a cave higher up. A secret way led down from the town to the spring, as at Jerusalem.

The village stands on the more northerly of two mamelons (2,572 feet) six miles from Jerusalem and seven from Bethel. Its strategic value was great, as it lay on the watershed of the central plateau, across which, passing its northern foot, ran the road which connects the pass of Bethhoron on the west with that of Michmash on the east. *El-Jîb* is built upon an isolated oblong hill standing in a plain or basin of great fertility. The northern end

[1] Hence we read that in the reign of Josiah the kingdom of Judah extended 'from Geba to Beersheba' (2 Kings xxiii. 8).

of the hill is covered with old massive ruins, which have fallen down in every direction, and in which the villagers now live. Across the plain to the south is the lofty ridge of *Neby Samuîl.*

Gibeon was one of four towns in the division of Benjamin given as residences for the sons of Aaron (Joshua xxi. 17). It was thus already inhabited by priests, and this, added to its other advantages, made it, humanly speaking, a not unsuitable place for the capital of the new kingdom. Its situation is certainly more central than that of Jerusalem, and the soil of the adjoining territory more fertile than the rocky slopes of Olivet and Moriah or the valleys that lie around them.

In the total destruction of the hamlet at Nob the Tabernacle was reserved. Its preservation was necessary to the plans of the King. It is in entire consonance with the habits and traditions of Hebrew historiographers that an act so founded in self-will and ambition as the transfer of the altar and tabernacle to Gibeon, with all its brutal accompaniments, should be unrecorded by them. Not in any way to refer to it or to notice its existence, was at once the most dignified censure of Saul, and the most complete repudiation of his action.[1] Such we find to be the case throughout the long and devout reign of David. Not until his death and Solomon's accession do we find any specific reference to the erection of the

[1] The verdict of history was spoken by the prophet Hosea, who wrote a few years before the fall of Samaria. He traces the moral corruption of the northern kingdom to its source at Gibeon: 'They have deeply corrupted themselves as in the days of Gibeah . . . . O Israel, thou hast sinned from the days of Gibeah. There have they continued' (Hosea ix. 9 and x. 9).

Tabernacle at Gibeon. And the record is then so full and minute that we at once feel it to be the breaking of a long and premeditated silence (1 Kings iii. 4). A single line in the history of David's officers of state records that Zadok, of the senior line of Eleazar, had been placed in charge of the Tabernacle at Gibeon, doubtless by Saul, and this entry shows that David did not kindle the flames of religious strife by repudiating Saul's action, but recognised it as a thing done, with which he did not wish to interfere (2 Samuel xx. 25).

No remains of buildings at *el-Jîb* have been discovered, such as those at *er-Râmeh* and *Tell el-Fûl*, which may be attributed to the Tabernacle as its outer walls.

A suggestion may be hazarded that the Tabernacle stood on the west side of *el-Jîb*, where, in the plain, is a large neglected well, at a distance of about a mile from the city. It is called *Bîr el-Özeiz*, and is 19 feet[1] in diameter and nearly filled up with earth, being only 8 feet to the water, which also is very scanty (Robinson's *Biblical Researches*, vol. i. p. 455; vol. ii. p. 256).

So large a work as the digging of this well would not have been undertaken without some adequate motive. It is not used for purposes of agriculture, and may possibly have once supplied an adjoining tabernacle with water.

[1] This must be a printer's error for 9 feet. I judge the well to have about the same diameter as the well at *Râmet*. It has lately been cleaned out and the upper wall rebuilt, so that no stress can be laid upon any diameter that is not taken below the level of the water. In February, 1904, the well was overflowing, and no agricultural use was being made of the water, which was running to waste.

But further investigation is necessary, though it may be remarked that the situation is suitable to the description that the Gibeonites hanged Saul's seven descendants 'in the mountain before the LORD'[1] (2 Samuel xxi. 9); if by this we are to understand the southern Mamelon, on which there are no ruins, and which is to the east of the well.

11. If, however, David never worshipped in person at the Tabernacle of Gibeon, and did no more than officially recognise the high standing of Zadok as one of two officiating High-priests,[2] we are not to suppose that the difficult ecclesiastical questions of the hour did not receive consideration from him, and some kind of solution. Whatever the treatment he adopted, we may be sure that it was at once tender and cautious, and in contrast to the high-handed action of Saul, the apostate King of Israel. That it was not sufficiently reverential we shall see.

[1] The mention of Geba (Gibeon) in 1 Chron. viii. 6 is suggestive, the more so as the Chaldee Targum adds to Manahath the words 'In the land of Edom.'

Considering how hostile were the relations of Benjamin and Judah after the death of Saul (2 Samuel iii. 1), and the fact that at David's election as king over all the tribes the greater part of the tribe of Benjamin kept their allegiance to the house of Saul (1 Chron. xii. 29), it is not improbable that the migration ('captivity') of a number of malcontent Benjamites, under the guidance of Naaman, Ahijah, and Gera, heads of fathers' houses in Gibeon, to Mahanath (= resting-place) in Edom, took place at this time.

At the restoration the return of some of their descendants is noted in 1 Chron. viii. 8–12.

[2] The resolution to build at Jerusalem a new tent and Tabernacle for the Ark, rather than to replace it in its old shrine at Gibeon, is the clearest possible proof of the adoption of this line of conduct.

On David's election as King over all the Tribes, and his capture of the fortress of Jebus—the *Uru-salim* of the Amarna tablets,—one of his first civic activities was the building of a palace for himself. With characteristic simplicity of language this is always called 'a house,' though built by Phœnician masons and carpenters, and fitted with cedar-wood (2 Sam. v. 11, and 1 Chron. xv. 1).

Questions of the situation of this house, and even of the locality of the city of David, belong to the topography of Jerusalem, and will be treated under that head. In the meantime it is enough to state the conclusions arrived at, which are that the Ophel (= swelling) spur is what should be known as the city of David, and that David's house stood on its highest point, and just below the south wall of the Haram area. It was reached by a gate and narrow street, running east and west, from the place of the Horse Gate, which stood at the south-west corner of Mount Moriah. The elevated situation of David's palace is implied both in the Bathsheba incident, and in the view of the procession of the ark Michal had from one of its windows.

Near to, possibly adjoining, the King's house, and farther to the west, was a place 'prepared,' i.e. levelled, for the ark of God, and a tent, in exact imitation of that at Gibeon, was pitched upon it (1 Chron. xv. 1).

That the site of the new Tabernacle adjoined that of the palace to which Solomon brought his Egyptian wife, we see in the curious reason given by him for removing her to the porch built for her on Mount Moriah. 'My wife,' said he, 'shall not dwell in the house of David,

King of Israel, because the places are holy whereunto the ark of the LORD hath come' (2 Chron. viii. 11).

It is probable that David's house was not of large size, and that the tent of the Tabernacle stood in a very limited, though enclosed, area (1 Kings viii. 1).

The language of 1 Kings iii. 4, that 'at Gibeon was the great high place,' is not only singular in appropriating to the Tabernacle a description commonly used of unauthorized places of sacrifice, but it also involves the idea of there having been another sanctioned high-place of inferior age and fewer associations. That when the golden ark of the Covenant arrived at Jerusalem they offered burnt-offerings and peace-offerings before God (1 Chron. xvi. 1), leaves no room for doubt as to whether David's tabernacle in Jerusalem was furnished with an altar or not. These offerings could have been made only at a properly-equipped tabernacle, before which an altar stood; though it is probable that up to this time the public sacrifices, offered daily, monthly, and yearly, on behalf of the whole nation, were slain at Gibeon, and offered by Zadok.

The new tent and its altar being ready for occupation and use, arrangements were made for bringing into it the Ark of the Covenant, which had, for nearly a century of years,[1] lain in its room at Kirjath-Jearim, with no High-priest in attendance upon it.

[1] This approximate total is thus made up: (1) Samuel's judgeship, from the loss of the ark to the election of Saul, 40 years; (2) length of Saul's reign, during the whole of which the ark was in captivity, about 20 years; (3) David's reign of seven years at Hebron, and portion of reign in Jerusalem, 10 to 15 years.

It was determined to have a great procession of many thousands, gathered from all places between the extremes of *Wady-el-Arish* and the Valley of the Orontes. In the record of this assemblage no mention is made of priests or Levites. Psalm cxxxii. was then composed.

The idea was that as the ark had been lost in battle, and its absence from the Tabernacle was thus a national act, so the whole nation, by its representatives, should escort it to Jerusalem, and that the soldiery and civilians should there deliver it to the priests, to be put into its place in the midst of the Tabernacle. The procession was formed at Kirjath-Jearim, with many musical instruments, and as the ark had been restored by the Philistines on a new cart drawn by two milch kine, so it was now put upon a new cart and placed in the care of two of the sons of Abinadab, one of whom led the oxen and the other drove the cart. As Kirjath-Jearim was neither a priestly nor a Levitical city, it is probable that Abinadab and his sons were laymen. They are nowhere given any sacred rank, nor is any blessing attached to their long care of the ark.

The policy pursued, that of following the Philistine precedent of removing the ark, and of making its restoration an act of national glorification, was a fatal one. Uzza was smitten to death for touching the ark when the oxen were restive. The procession was at once arrested. David, who was present, as one of the players upon harps, on the instant gave orders to abandon the progress.

The ark was reverently carried by Levites into the house of one of their number who lived in a neighbouring

village,[1] and Israel dispersed with a new sense of the reality of the Mosaic Law, and of the penalties following on those who disobeyed it.

Obed-Edom, into whose house the ark was received, was a Kohathite Levite of the family of Korah, the Kohathites being the highest in rank of all the Levites, Aaron and Moses belonging to their stock. He was a resident of Gittaim (= two winepresses), a village that stood beside the road, somewhere in the ten miles that separated Kirjath-Jearim and Jerusalem. Its site has not been recovered, though it is mentioned in David's time (2 Samuel iv. 3), and again after the restoration (Nehemiah xi. 33). From the name of his home, and from the prominence into which the events of this day brought him, he came to be known as Obed-Edom the Gittite. The ark remained in his care for the space of three months, during which time we are told the Lord blessed him. The nature of the blessing may be seen in the names of the eight sons (1 Chron. xxvi. 4–5) who were successively born to him, and whose descendants became principal members of the Temple guard. Till then he evidently had no son. The fact of these sons having been born, and having grown to early manhood subsequent to the removal of the ark to Jerusalem, is one of many indications of the time which elapsed between different events recorded in the text, and which stand adjacent to one another.

[1] A number of the Tabernacle Nethinim were at this time living in this village (2 Samuel iv. 3). As they had fled from the massacre by Saul, it is probable that it lay outside the boundaries of the tribe of Benjamin. The text implies this.

12. During these three months great preparations were made for the further removal of the ark with all fitting solemnity and honour. The ritual of the Law was studied and minutely followed. Both the High-priests were ordered to be in attendance, that they might wrap up the ark in the inner veil of the sanctuary, as prescribed in Numbers iv. 5–6, and place its staves in position. Neither priests nor Levites were allowed to touch the ark, or to look upon it when uncovered. The Kohathites then carried it, the ends of the staves resting upon their shoulders. For this purpose 120 attended the procession from Gittaim; other Levites to the number of 742 attended as musicians. The sons, i.e. the associates, of Jeduthun who were Merarites, had harps and other instruments of percussion. The sons of Heman, the grandson of Samuel, and so Kohathites (1 Chron. vi. 33), bore trumpets and other wind instruments. The sons of Asaph (Gershonites) were singers. The members of these three guilds of music were under a conductor named Chenaniah, chief of the Levites, who instructed about the carrying of the ark, because he was skilful (1 Chron. xv. 22). Some of the instruments were set to Alamoth and others to the Sheminith. It is interesting to know that the musical octave was in use in those early times, of which the superscriptions of Psalms xlvi. and vi. are memorials.

When the procession moved off, seven priests, robed in linen garments and blowing silver trumpets, immediately preceding it, and it was seen that no disaster occurred, but that God accepted the services of the porter-Levites, sacrifices were offered by the roadside. With great

rejoicings the ark was carried to Jerusalem (Obed-Edom and Jehiah being in special attendance upon it), and set in its place in the Holy of Holies within the new Tabernacle which had been built for it in the city of David. Sacrifices in great number were then offered on the altar before it, and the day closed with royal gifts of bread and raisins and wine to every adult—the flesh of the peace-offerings being common to all.

We have in the 16th chapter of 1 Chronicles the official setting of the Psalm which David composed for this great occasion. And in Psalms cv. and xcvi. we have the same poem as it was divided into parts and amended for use in the Temple worship. Besides these memorials of that day, we have in Psalms xv. and xxiv. two other lyrics which were written with direct reference to the death of Uzza, but their tone of sadness and query does not comport so well with the day of rejoicing as with the period of anxiety which immediately preceded it.

13. There were now, and for several years, two fully equipped Tabernacles in Israel. That at Gibeon was presided over by the representatives of the elder line of Aaron and had as its distinctive glory the original Tabernacle and Altar made by Moses. That at Jerusalem was distinguished by having the original Ark and Mercy-Seat and the two tables of the Law, and was attended by the heir of the younger line of Aaron's descendants.

Both were under the protection and support of the King, as supreme ruler in Church and State—subject only to the theocratic idea under which the nation was

called into existence. With consummate kingcraft David determined upon doing nothing which should divide Israel into two hostile camps of worshippers. The younger brothers and sons of each High-priest being ordinary priests, and not High-priests, and the genealogies being carefully kept, no difficulty arose in surrounding each of the two heads of the sub-clans with a number of associate-priests. They would naturally group themselves around the several princes of their family at Gibeon and at Jerusalem. The danger of schism in such an arrangement was one which David took an early opportunity of correcting, as we shall see. But at the first this is how the two altars were served, so far as sacrificing priests were needed.

With Levites the case was different. The three clans of these were divided by David's authority immediately on the establishment of regular worship in Jerusalem.

Asaph and all the Gershonites (1 Chron. vi. 39–43) ministered before the ark continually, by turns, as every day's work required, either as musicians or as attendants on the slaughterers of sacrificial animals.[1] Obed-Edom the Gittite, with sixty-seven of his brethren, with another Obed-Edom, a son of Jeduthun, and Hosah, another Merarite, in all seventy persons, or ten

[1] At the reopening of the Temple on the accession of Hezekiah, the priests were too few to flay the sacrifices. They were therefore helped, in this part of the work, by the Levites (2 Chron. xxix. 34). This passage is therefore against the view that the Levites up to this period slaughtered the sacrificial animals, as, when needed, they only assisted to flay them. But in the amended rules of Ezekiel they were to be allowed to kill the sacrifices for the people, but not more directly to attend upon the altar (Ezekiel xliv. 10–14).

per diem for every week, were appointed to be door-keepers of the Tabernacle in Jerusalem. The staff was now complete. Priests, Levites, singers, and doorkeepers were in their places, and chief amongst them was Asaph, the writer of Psalms l. and lxxiii.–lxxvii. That Asaph was the writer of certain Psalms is affirmed in 2 Chron. xxix. 30.

The remaining Levites of the sub-clans of Heman and Jeduthun (Kohathites and Merarites) were in the choir, or assistants to the slaughterers in the shambles,[1] or at the gates of the Tabernacle of the Lord that was at Gibeon (1 Chron. xvi. 39–42). From the terms in which this arrangement of Levites is recorded it would appear that the service of song in the House of the Lord that was at Jerusalem was, with the exception of the priests' trumpets, purely vocal, and that at Gibeon it was largely, if not wholly, instrumental. This is what might have been anticipated when we read that, at the progress from Gittaim, 'On that day did David *first* ordain to give thanks unto the Lord by the hand of Asaph and his brethren' (1 Chron. xvi. 7). The precedent then established was retained by the same authorities, David and Asaph, in the worship which daily rose from the city of David. Devotional words set to music were now first introduced into the Church by the poet-king and the psalmist-singer. The older and more conservative method of musical worship by instruments was naturally retained at Gibeon. This was in harmony with the law of Numbers x. 10. Such an

[1] See note on p. 70.

innovation as was in use in Ophel not only rendered the service of the House of God more intelligently devout, it also called for such psalms and hymns and spiritual songs as we have in the body of the Psalter, and has thus been an unspeakable blessing to the Church in all subsequent ages.

The genealogy of the three chiefs of the two choirs, with Asaph standing on the right of Heman, and Ethan (= Jeduthun) on his left, is given in 1 Chron. vi. 16–48, it being stated that their appointments were merely provisional 'until Solomon had built the House of the Lord in Jerusalem' (verse 32). The 'tabernacle of the tent of meeting' is, however, spoken of as one, though in two parts, the representatives of the whole body of musicians being present at the recognition meeting. In chapter xvi. 37–42, their separation into two choirs is recorded, with their constituents, as already noted.

14. It is to be imagined that the removal of the ark to Jerusalem, and the inauguration of the Tabernacle-service there, took place about the middle of David's reign of forty years. The true sequence of events is, however, of more importance than an exact chronology of any one of them, and the next development bearing upon our subject is that of the acquirement of a site for the future temple, and its occupation by an altar.

This took place in connection with David's census of the people, a matter which the Law, as we have it, sanctions, though so shrewd a man as Joab knew that it

would be a cause of guilt to Israel; the reason being that the half-shekel of atonement-money for each male above 20 years of age was not proposed to be collected, according to the law of Exodus xxx. 11–16. The penalty for not doing so was to be an outbreak of the plague. The sequel of the census taken by Joab is well known. It is, however, worthy of notice that the command to build an altar to Jehovah in the threshing-floor of Ornan the Jebusite was of Divine origin, and came through the prophet Gad (1 Chron. xxi. 18). This command was at once obeyed, and David himself went to effect the purchase. It is a point of capital urgency to show that the threshing-floor (as might be anticipated) lay outside the circuit of the city wall as it then stood. Evidence on this behalf is reserved until it can be more fully dealt with in the topography of Jerusalem. It is there inferred that the original north wall of the city of David ran diagonally across what is now known as the Haram area, cutting off its south-west corner, and leaving the site of the Sakhrah Stone outside the fortification.

To this spot David came, buying the threshing instrument and oxen for fifty silver shekels,[1] and the large site of ground, probably the whole farm, for 600 shekels of gold.[2] As soon as the purchase was completed, David built there an altar to Jehovah, and offered the two oxen as a burnt-sacrifice, on which fell the fire of Heaven.

[1] At 3*s.* 4*d.*, about £8 10*s.*

[2] As the ratio in value of silver and gold in early times was that of 13 : 40, a gold shekel of the same weight as one of silver would be valued at about 10*s.* Hence 600 such = £300.

When we remember that every Jewish altar was placed upon a base of either sods or unhewn stone, by which the site was at once raised and levelled, and that the brasen altar was, in every case, a small moveable box, with an interior grating, it is hardly possible to avoid the conclusion that the actual altar then used for the burnt-sacrifice was that which had stood before the Tabernacle in the city of David. It was fitted with rings and staves for removal, being doubtless modelled after that constructed by Bezalel in the wilderness. This supposition receives support from the fact that all the proceedings of that day were hastily carried out, on account of the plague then raging, and which prevented David's going to Gibeon (1 Chron. xxi. 29). To suppose that a delay of several days would have followed, while a new altar, covered with plates of brass, was being constructed, is to violate all the probabilities of the case.

On the miraculous proof of the acceptance of his sacrifice, David emphatically said, in the presence of the High-priest and other sacrificial attendants, 'THIS is the House of Jehovah, and THIS is the altar of burnt-offering for Israel.'

It is in harmony with Eastern habits of thought and conduct that a spot consecrated by a Theophany should at once supersede any other in its neighbourhood which had hitherto been used for sacrifice, and was not so highly credentialled (Ex. iii. 5; Josh. v. 15). The altar at Gibeon, till the reign of Solomon, continued to smoke with victims, but it is against the evidence to suppose that the brasen altar made by David was ever taken back to

its place before the Tabernacle. There is, on the contrary, evidence to show that from the moment of David's authoritative statement to that effect, the site of the threshing-floor became the place of sacrifice for all Israel, and that the national sacrifices provided by the King (2 Chron. xxxi. 3) were, from this time, offered thereon. If so, individual and occasional sacrifices of peace- or sin-offerings would also be presented there. The whole establishment of priests and Levites engaged in this work would thus be transferred, from before the new Tabernacle, to the place which the Lord had chosen. This involved, further, that as all offerings were required to be 'blown over' by trumpets (Numbers x. 10), a constant service of priests would be in attendance there, to make the blasts, and to sprinkle the blood upon and at the foot of the altar.

An entirely new situation had thus arisen in the conduct of the public worship of the chosen people. The site of the threshing-floor, being without the city, left it an unenclosed or but lightly-enclosed space. The miracle so unexpectedly wrought there made it, in a moment, a place of the utmost sanctity, and required it to be guarded, day and night, against the intrusion of unclean animals and the defilements of man. No eyes but those of the chosen priests and worshippers might gaze on an altar of Judaism, or on its attendant sacrifices.

If at this time a Levitical guard were appointed, it could be stationed only according to the points of the compass, as there was no enclosure-wall, and there were no gates.

This accordingly was what was done. We have in

1 Chron. xxvi. an account of some rearrangement of sanctuary-guards which can apply only to this period of history and to these special circumstances. Appointments of Levitical guards were made by lot, northward, southward, eastward, and westward. To these several directions 'courses' of doorkeepers were apportioned, who held wards one over against another.

As we examine the lists of these, we discover that they were composed largely of the same families and men as had previously been detailed to serve the Jerusalem Tabernacle in the same capacity, the transfer of the whole body of guards being apparently complete, the number being at the same time increased. The total of 96 was thus made up:—

Obed-Edom and 62 others	63
Meshelemiah and 18 others ...	19
Hosah and 13 others	14
	96

Of the three 'chief men,' Obed-Edom and Hosah have already been before us as chief porters on Ophel. In the third case, Shelemiah, or Meshelemiah, appears as one of the sons of Asaph, with a contingent from that family (1 Chron. xxvi. 1). This is what we should anticipate when we remember the close connection of Asaph with the Tabernacle built by David.

These 96 persons were divided into four courses under as many captains, Zechariah, the son of Shelemiah, being chosen for the fourth officer, as being 'a discreet counsellor.'

Their stations were:—

Eastward	Shelemiah
Northward	Zechariah[1]
Southward	Obed-Edom
Westward	Hosah

In giving us these statements the chronicler adds several particulars of his own knowledge as to 'the storehouses,' 'the Parbar,' and 'the Causeway,' which are intended to be explanatory of the various places held by the Levitical watchers during the standing of Solomon's Temple. These items are the work of a post-restoration editor, and on that account are not to be rejected as untrue, but accepted as supplementary. An unaltered early record was here evidently 'written over,' later material being incorporated.

15. There were, during the last years of the reign of David, three centres of worship in Israel. At Gibeon was the original Tent and altar. On Ophel was the tent prepared by David, with its sacred depositum of the Ark, before which incense was burned daily. On Moriah was the new altar consecrated by the command and deed of Jehovah.

When the prohibition came to David that he was not to build the Temple behind the altar, he set himself to make complete preparations for its erection by his son.

[1] In an historical parenthesis of two and a half verses, written by a post-restoration scribe, Zechariah, the son of Meshelemiah, is said to have been porter of the door of the tent of meeting (1 Chron. ix. 19^{b}, 20, 21), thus confirming the above, and showing the persistence with which the term 'door of the tent of meeting' was applied to the northern or sacrificial gate.

The national unity, as well as the national faith, required the supercession of rival tabernacles and altars, and the aged king did what lay in his power to hasten the erection of the Temple.

A great step was taken when the question of site had been settled and partially occupied. As the Temple was to stand to the west of the altar, all such matters as levels, areas, and drainage could be taken into account in the preparation of drawings and specifications. That there were such will cause no shock of incredulity to those who are acquainted with the elaborate preparations made by the architects and artists of antiquity. Not only were such prepared, by David's orders, but carefully compiled bills of quantities were drawn up, in which the weight of gold and of silver for all the plate and furniture to be used in the new Temple was set down, item by item (1 Chron. xxviii. 14–18).

The drawings of the plans (called the 'pattern') included these separate items:—

1. The pattern of the porch, with
   (*a*) The houses thereof,
   (*b*) The treasuries thereof,
   (*c*) The upper rooms thereof.
2. The pattern of the inner chambers, one being,
   The house of the Mercy-Seat, or Holy of Holies.
3. The pattern of the courts of the house, with
   (*d*) The chambers round about,
   (*e*) The treasuries of the House of God,
   (*f*) The treasuries of the dedicated things.

(1 Chron. xxviii. 11–12.)

1. By the first of these we are to understand the design or plan for the porch of 120 cubits (= 144 feet) in height.

(*a*) By the 'houses' or rooms 'thereof,' is intended a royal oratory over the porch entrance, with an attic above it, in which was stored, at one time, the wine offered with all peace-offerings (Jeremiah xxxv. 1–5).

(*b*) The treasuries of the porch were two small rooms with thick walls, one on either side of the porch entrance-hall (called 'the entry of the house,' 2 Chron. iv. 22), in which were kept the golden and silver vessels of the sanctuary (1 Kings vii. 51). These included the furniture of the altar, and were under the immediate care of the High-priest and his deputies.[1]

(*c*) By the upper rooms of the Temple we are to understand the two attics over the two holy chambers, and of the same floor-area as they. In Herod's Temple they were divided by a low railing, below the ceiling of the roof, which may have been the continuation of a precedent.

2. The inner chambers were the pronaos and the adytum, known as the Holy Place and the Holy of Holies. The latter of these was a cube of 24 feet, and the former a double cube of the same dimensions.

3. The transfer of thought in verse 12, from the central and main building to the surrounding structures, is

[1] A somewhat similar plan was afterwards adopted in the Parthenon, which was finished in 438 B.C. The Temple proper was divided, by pillars, into three parts. In the western of these small chambers were kept vessels for use in the sacred processions, with articles of gold and silver. It became the Treasury or State Bank of Athens.

marked by another introduction, in the words 'And the pattern of all that he had by the Spirit.'

The first of these to be mentioned is the 'pattern of the courts of the house,' by which we understand the arrangement of one court, called the priest's or inner court, within another court, called the people's or outer court. Such was the interior disposition of the enclosed ground-area upon which the Temple stood, as will appear later.

(*d*) By the 'chambers round about' are intended the three stories of thirty priests' chambers that were built outside the side walls of the Temple and of the Oracle (1 Kings vi. 5–6). These are spoken of as being a portion of the court, and not of the Temple itself—a fact which was emphasized in Ezekiel's Temple-plan by their having separate walls adjoining those of the sanctuary, and in Solomon's by the ceiling beams resting free. As they were for the use of man, and not a part of the dwelling-place of the Most High, they are appropriately ranged as a part of one of the courts.

(*e*) The treasuries of the House of God were wholly distinct from those of the Temple, already mentioned. They were the storehouses, the outward care of which was committed to the sons of Obed-Edom, and described as being on the southward side of the Temple area (1 Chron. xxvi. 15, 17). Possibly built by David during his lifetime, as their being separately guarded would imply,[1] their contents were placed in the care of

[1] From the statement that King Hezekiah had store-chambers, to contain the tithes, built *within* the enclosed area of the Temple (2 Chron. xxxi. 11), it may be inferred that till his time they had stood without that enclosure

Shebuel, representative of Gershom, the eldest son of Moses (1 Chron. xxvi. 24). In them was stored the corn and wine and oil which were paid as tithes by the whole nation, and which formed so large a part of the sustenance of priests and Levites. It was the plan of these erections, together with their place in the court, that David gave to Solomon, as 'the pattern of the treasuries of the House of God.' These structures are afterwards mentioned by Nehemiah as being the 'storehouses of the Gates' (Nehemiah xii. 25).

(*f*) The treasuries of dedicated things were two chambers similar to the last described, in which were placed all the spoil won in battle from the time of Joshua and after. The references to this will be found in Numbers xxxi. 21–23, 51–54, and 1 Chron. xxvi. 26–28.

These chambers when built were placed under the care of Shelomoth, the lineal descendant of Eliezer, the second son of Moses. In this way did later generations honour the memory of their great lawgiver. The care of the outside property of the Temple was thus uniformly committed to the Levites, and over the whole of the chambers, the contents of which were committed to the sons of Moses, was placed a chief treasurer named Ahijah, also a Levite (1 Chron. xxvi. 20). It was not he who wrote the book of the acts of Solomon mentioned in 2 Chron. ix. 29. The scribe is described as a Shilonite, or resident of Shiloh (1 Kings xiv. 2), and therefore an Ephraimite, while the superintendent of the treasuries was a Levite.

and to the south of it. In the Herodian Temple they occupied the four corners of the Treasury Court, which lay to the south of the Temple.

The tribal affinities of these three families of Levites (as already given) are confirmed by the statement of 1 Chron. xxvi. 19, that the courses of the doorkeepers were 'of the Korahites and the sons of Merari,' Obed-Edom being a Korahite, of the family of Korah, and Shemaiah and Hosah being Merarites.

It is probable that, at the first, the altar on the threshing-floor was guarded by a single sentinel on each of its four sides, the captain for each side furnishing these in rotation out of the twenty-four men of which his guard consisted. Or, the Jewish month being one of four weeks, each course may have furnished the guards for a single week in turn. As, however, the Temple service became more elaborate with Solomon's erection, the number of guards on duty at the same time was increased to twenty-four. It is the stations of this enlarged guard that are detailed by the chronicler. A curious error of some copyist occurs in the first two words of verse 16, chapter xxvi., the last word of the previous verse being repeated, and the corrected sentence reading 'To Hosah westward.' The twenty-four guards on duty in the Temple of Herod, with their stations, are given in the Mischna, and will be referred to in due course. This number was continued from the time of Solomon's Temple to the destruction of the Temple by Titus, and is that given by the chronicler, at the restoration, as a matter of previous history (1 Chron. xxvi. 12–19).

16. I. From the two-verse recapitulation of the

buildings to be erected it is evident that it is an incomplete summary of them. It is so for two reasons. One, because it does not include any docket of state erections or royal dwellings. The house of the forest of Lebanon, the palaces that Solomon built for himself and Pharaoh's daughter, and the hall of justice or judgment are not included. Civic conveniences and state requirements were not classed with Divine appointments. Another reason may be that the roll of the patterns given to Solomon may have contained ground-plans and drawings of the courts and their surrounding erections. The plan of Gudea's palace (*v.* Plate, p. 142), dating back to nearly twenty centuries before David's day, may suffice to show how such outline-drawings were prepared. Not only were these drawings and building-specifications complete, but the weight of the precious metals for every item of furniture was calculated. We know that, in place of the single seven-branched candlestick in the Tabernacle, ten such candlesticks were made (1 Kings vii. 49). Beside these, a new golden altar of incense and ten tables of shew-bread were constructed. Also the gold-plating for the two olive-wood cherubim, which flanked the ark, was estimated for. All the gold and silver for these articles of furniture was duly estimated and provided. The ark of the Covenant alone remained unrenewed.

The last official act of David's reign was to hand over these documents to Solomon in a national assembly of the heads of the people, with solemn charges to him and to them to carry out the work of building the Temple with

courage and zeal. On the next day, amid great religious festivities, Solomon was, a second time, anointed king, and assumed the reins of government.

II. Amongst the papyri or parchments handed to the youthful sovereign on this memorable day was one containing nominal lists of the courses of the priests and Levites, who should do all the work of the service of the house of the Lord on its completion (1 Chron. xxviii. 13). The preparation of this record involved immense labour, and was accomplished when David was old and full of days. Of even greater age was Zadok, from Gibeon, and with them was young Ahimelech, son of Abiathar (1 Chron. xxiv. 3).

(*a*) The succession to the High-priesthood in the new Temple was left undetermined and untouched. It was solved, as we know, by the deposition of Abiathar, soon after Solomon's accession.

(*b*) The priests were scheduled, and it was found that there were many more of one family than of the other. In the division into twenty-four courses the lots were so cast as to effect a complete amalgamation of the rival hierarchies. Two lots were taken from the house of Eleazar, and, alternately, one from the house of Ithamar. The name of the prince of each course is given in 1 Chron. xxiv. Three of these were known by the same names in the time of Nehemiah (1 Chron. ix. 10, and Nehemiah xi. 11).

(*c*) The Levites were similarly divided into an equal number of courses for rotation in service. Of these

courses nine were formed of Gershonites, nine of Kohathites, and six of Merarites. Each of the courses consisted of a thousand men. Their duties are defined as those of tithe-gatherers, police, cooks, weighers, sweepers and cleaners (1 Chron. xxxiii. 28–32, and Nehemiah xii. 44–47).

(*d*) The singers, again, were divided into twenty-four courses of twelve members each. These were chosen for their fitness for this work, and not by their descent alone. Fourteen of the sections were Kohathites, six Merarites, and four Gershonites. In the Temple built after the Captivity, to the singers were assigned certain chambers attached to the Temple, it being explained that they dwelt in the chambers, for they were employed in their work day and night (1 Chron. ix. 33). The number of twelve to each choir was retained. The Asaphite choir of 2 Chron. xxxv. 15 is to be understood as being so named after its founder.

The way in which these several courses of priests, Levites, and singers rotated in service was dependent upon the peculiar division of time amongst the Hebrews. Their months were lunar, twelve of which were reckoned to each year, with an intercalary month, called a second Adar, inserted now and again to keep the seasons. Seven such were required every nineteen years.

Each of the several twenty-four courses was on duty for a single week at a time, the exchanges taking place at noon on the Sabbath. An illustrative use made of this custom may be seen in the account of the revolution under Jehoiada, which owed its military success largely

to the fact of there being two courses of priests and Levites in the Temple at the same hour (2 Kings xi. 9).

In this way each course undertook duty twice in forty-eight weeks, the occasional insertion of an intercalary month providing variety, so that in the course of a few years every set of courses would attend at each of the four seasons.

(*e*) As the number of Levites was in excess of those required for the interior service of the sanctuary, others were appointed doorkeepers, to the number of four thousand. These were chosen exclusively from the clan of Merari and from the family of Korah the Kohathite, to which Obed-Edom belonged. It is not stated in the contemporary histories that the porters attended in courses. On the restoration we find that the four chief porters, who were Levites, had their lodging round about the house of God, and their brethren in their villages were to come in every seven days from time to time to be with them (1 Chron. ix. 25–27). The number on duty every day is given by the Talmud at 240, ten being detailed for each of the twenty-four stations in the Herodian Temple. It is, therefore, evident that there must have been some system of relief by which a part only of the 4,000[1] porters should be on duty at once. It was their duty to see that no one ceremonially impure should be admitted into the court of the sanctuary (2 Chron. xxiv. 19).

A writer in Hastings' Dictionary of the Bible (*art.* Genealogy, iii. 20) finds a difficulty in the fact that

[1] Each of the four chief doorkeepers thus had the command of a thousand assistants. This would allow of 40 for each of 25 weeks.

Jehdeiah and Isshiah, chief men of the sons of Amram, father of Moses, were the contemporaries of the descendants of Moses, who were the rulers of the treasuries. This difficulty is obviated if it be observed that these two men were the heads of '*the rest* of the sons of Levi' (1 Chron. xxiv. 20) after the principal appointments had been made.

(*f*) Of the surplus of 14,000, six thousand others became officers and judges.[1] By the Law of Moses judges and officers were to be appointed in every Levitical city of the tribes (Deut. xvi. 18), and, from the blessing of Moses, the tribe of Levi was to 'Teach Jacob thy judgements and Israel thy law' (compare Deut. xxi. 5 and xxxiii. 10).

The appointment of these 6,000 was not, therefore, a new thing, but a reconstruction of the personal machinery of the Law. In the days of Nehemiah, Levites are described as having the oversight of the outward business of the house of God (Nehemiah xi. 16), which would include the administration of law as well as the collection of tithes.

It is interesting to note that Chenaniah, the chief Levite, who conducted the music when the ark was brought to Jerusalem (1 Chron. xv. 22), was now, with his sons, appointed over this great department of State (1 Chron. xxvi. 29).

(*g*) Four thousand others were appointed instrumental musicians, and were thus completely separated from the singers, and given an inferior position. They were

[1] Counting eastern and western Manasseh as two tribes, this would give an average of 500 Levites for legal purposes to each tribe. Each minor court consisted of not less than seven persons.

not divided into courses, and it is supposed that their services in the Temple were voluntary and occasional.[1] Of course, like other Levites, they had their share in the Temple offerings when there, and their right to a plot of land in one of the cities of the Levites.

17. Not only was the personnel of the priesthood reformed before David's abdication; the land held by them was also subjected to revision.

By Joshua's direction twelve cities had been set apart for the Aaronites, and an average of twelve others for each of the three clans of Levi, forty-eight in all.

Of these, six were cities of refuge, to afford protection to those who were guilty of homicide, as distinguished from murder. For the purposes of easy access these towns were selected principally for their central situations. According to the direction of Deut. xix. 3, three were on the east and three on the west of the Jordan. Those on the east were first chosen, and, later, three others on the west, the positions of which were as nearly as possible in line with those on the east. Thus, Bezer in the wilderness (Joshua xx. 8) was paralleled by Hebron. The ruins of *Kusûr Beshaêr* are three miles south-west of Dibon, and lie on the north bank of the river Arnon. The Arnon was the northern boundary of Moab at the time of the conquest,

[1] Referring to the Herodian Temple, Edersheim says, 'The number of instrumental performers was not limited, nor yet confined to the Levites, some of the distinguished families which had intermarried with the priests being admitted to the service' (*The Temple*, p. 143). The instruments used were cymbals, psalteries, and harps (2 Chron. xxix. 25).

but in the time of Jeremiah (xlviii. 24), after the fall of Samaria and the captivity of eastern tribes, under the name Bozrah,[1] Bezer belonged to Moab. It is mentioned on the Moabite Stone as having been rebuilt by Mesha.

The two central refuge cities were Shechem in the west and Ramoth-in-Gilead in the division of Gad (= *Rêimun*), on nearly the same parallel of latitude.

The two northern refuge towns were Kedesh-in-Galilee (= *Kades*) and Golan in Bashan. As a possible site for Golan, Dr. Merrill suggests *es Sanamein* on the Haj pilgrim-road, and in the proper latitude.

Of these six towns Hebron was occupied by priests and Kohathite Levites, Shechem by Kohathites, Golan and Kedesh by Gershonites, and Bezer and Ramoth by Merarites. No change in any of them was carried out at the time of David's revision.

(*a*) Twelve other towns, in the divisions of Judah, Simeon, and Benjamin, were set apart, at the occupation, to be inhabited by the families of the sons of Aaron, known later as Aaronites. The only indication we have of the number of their inhabitants is that given at the time of David's removal from Hebron to Jerusalem, when we are told that nine hundred men of the house of Aaron under Zadok, afterwards High-priest, came to make David king.

If we except some slight changes of name, as Hilen for Holon, Allemeth for Almon, there are but two or three alterations in them at the time of David. One is the

[1] That Bezer was also known as Bozrah is confirmed by Eusebius (*Onom.* 232). There was a second Bozrah in Bashan.

substitution of Ashan for Ain, in the land of Simeon. These places were neighbouring towns near to Beersheba (Joshua xix. 7).

Another modification of Joshua's list is of greater significance; it is that of the omission of Gibeon as a city of the priests, with no substitute. In this severe treatment we have one certain result of Saul's attempt to make Gibeon the capital city. Its complete supercession as a sacred place is strong evidence of that intention, as no other reason of sufficient weight can be found to have caused so violent and unparalleled a disturbance of the long-existing order. The removal of the priests' families from Gibeon would largely diminish its relative importance in the cities of Israel, and was also in the nature of a punishment inflicted upon them, as having been parties to Saul's policy of local aggrandisement. Juttah in Judah was also abandoned, as the division of Judah had an undue number of sacerdotal cities, and the scheme of reduction was to take two cities from the priests and four from the Levites.

(*b*) This diminution of two in the number of the priestly towns was accompanied by some similar cases in the Levitical cities, though the causes of the reduction in their case are more obscure. The capture of Jerusalem, and its coming importance as the prospective place of the Temple, would bring a large number of priests and Levites into it, and would thus contribute to the desirability of lessening the number of Levitical towns on the new register.

Another political change which had occurred within

the past three centuries was that, during the time of the Judges, the small tribe of Dan, originally located about the seaboard of Joppa, had removed to the northern Dan lying near the sources of the Jordan. The tribe consisted of but a single clan, the patriarch Dan having had but one son.[1]

The 600 men who went to form the settlement at Laish were probably the bulk of the tribes' manhood, but some families must have remained at home, as Samson's exploits were subsequent to the migration. In the south, the tribe gradually declined in numbers, though it is not correct to say, as does a writer in Hastings' Dictionary (*art.* Dan), that the tribe is 'omitted from the genealogies of the Chronicles.' Hushim is there named (1 Chron. vii. 12), and in his proper place in the order of the tribes, Judah being named first as that of the Tribe of David, and Benjamin last as that of the ex-royal family of Saul.

The vacant territory of Dan, never more than partially conquered, was occupied in part by the Philistines and in part by the tribe of Ephraim (Judges i. 34, 35). As a consequence we find that when David rearranged the Levitical cities the name of Dan is not mentioned, and those of Ephraim are introduced with the enigmatical sentence, 'Some of the families of the sons of Kohath had cities of their border [taken] out of the tribe of Ephraim' (1 Chron. vi. 66). The hidden reference here is to the fact that of the four Kohathite towns formerly attributed

[1] 'Shuham' in Numbers xxvi. 42 is the result of a simple transposition of the letters of Hushim (Genesis xlvi. 23). In 1 Chron. vii. 12 there is a scornful reference to idolatrous Dan in 'Aher' as 'Another one.'

to the tribe of Dan, two, Eltekeh and Gibbethon, entirely disappear, and two, Aijalon and Gath-rimmon, are included in those of Ephraim.

Another change in the Ephraimite towns of the Kohathites was the substitution of Jokneam, at the eastern foot of Mount Carmel, for Kibzaim, a town in the south of the tribe, mentioned with Gezer[1] and Bethhoron (Joshua xxi. 22), and which had probably fallen into the hands of the Philistines, or been destroyed by war.

At its first mention, Jokmeam (called Jokneam, Joshua xxi. 34, now *Tell Keimûn*) appears as a border town of Zebulun, and was given to the Merarites. It was now, by David, transferred to Ephraim, being on their boundary, and given to the Kohathites. Ephraim thus gained an extension of territory to the north as well as to the south, this being one of many indications of the growing power of that tribe.

In the adjoining division of western Manasseh, the Kohathite towns of Taanach (Joshua xxi. 25) and Gath-rimmon were replaced by Aner (= *Ellâr*), north-west of Shechem, and Ibleam (Joshua xvii. 11), the modern *Yebla*, five miles north of Bethshan.

The number of towns in the occupation of the Kohathites was thus reduced from ten to eight, the two Danite towns of Elteke, the Eltekeh of Joshua xix. 44, and Gibbethon,

[1] Gezer was a city of the Kohathite Levites, now known as *Tell Jezer*, lying between the road and the rail from Jaffa to Jerusalem. A rock inscription has been found here, the translation of which is, 'The boundary of Gezer.' As Gezer was a walled town (1 Kings ix. 17), this inscription should measure 500 yards from the wall of the city.

modern *Ras-el-Ain*, being finally lost to them and, for the time, to the nation.[1]

(*c*) The thirteen towns given by Joshua to the sons of Gershon remained unaltered in number to the time of Solomon. A comparison of the early list with that of the monarchy shows, as might be expected, some changes in name. Thus :—

1. Be-eshterah (Josh. xxi. 27) (=House of Ashtoreth) becomes Ashtaroth (1 Chron. vi. 71). It was formerly one of the royal cities of Og, King of Bashan, and its remains are known as *Tell 'Ashterah*, twenty miles east of the Sea of Tiberias.

2. Kishion in Issachar becomes Kedesh, on the west side of the plain of Megiddo.

3. Mishal in Asher becomes Mashal, now *Maîsleh*, to the north of the Bay of Acre.

4. Hammoth-dor in Naphtali becomes Hammon, the famous hot springs at the south of the Lake of Gennesaret.

5. Kartan in Naphtali becomes Kiriathaim, the meaning in each case being 'double city'; to the west of the Sea of Tiberias, but undiscovered.

A more serious clerical alteration than any of these is a copyist's miswriting of Jarmuth for Ramoth in Joshua xxi. 29.

There was a place of this name in the Shephelah of

[1] Nadab, the second king of Israel, attempted to wrest Gibbethon from the Philistines, and was assassinated while besieging it (1 Kings xv. 27). The siege was raised by Omri (1 Kings xvi. 15–17).

Judah (Joshua xv. 35), the ruins of which are at *Yarmûk*, to the north of Socoh. The Ramoth intended is a town in Issachar, many leagues to the north. Its site has been recovered at *er-Râmeh*, between Samaria and Dothan. It is the Remeth of Joshua xix. 21.

Another town replaced in Issachar was En-gannim (= fountain of gardens), the *Jenîn* of to-day, which gave place to Anem (= two springs), and is represented by the modern village of *Anîn*, on the hills to the west of the great plain.

Also Hukok, the modern *Yakûk*, to the west of Capernaum, in the territory of Naphtali, took the place of Helkath in the territory of Asher (= *Yerka*). The Gershonites' thirteen cities therefore remained undiminished in number, but six of them lay in the two most northerly tribes on the west, and two in far-off Bashan on the east. As the Levites were the officers of the Law and Judges in all the Tribes, it was necessary that the old Jacobean prophecy should be fulfilled, and that they should be divided in Jacob and scattered in Israel (Genesis xlix. 7). In this way the civilizing effects of law were everywhere present, and the temporary residence of Levites in all the cities of Israel tended to diminish the pressure of population in their own towns.

(*d*) Coming, lastly, to the twelve cities of the Merarites, we note that of these eight were in Eastern Palestine—four in the division of Reuben and four in that of Gad. These towns remained unaltered, in number and in name, from the days of the conquest to those of the monarchy—if we except the slight alteration of Jahaz into Jahzah,

the site of the nation's earliest victory after the crossing of the Arnon (Deut. ii. 32).

As a counterbalance to this semi-expatriation of more than half their number, the Merarites had the remaining four cities of their clan amid the fertile hills and valleys around Nazareth and to the north of the plain of Megiddo. This was the territory of Zebulun, and for some reason which cannot now be divined David and his assessors made a complete change in the Merarite holdings in this division.

Jokneam was built on the south bank of the river Kishon, this being 'the brook that is before Jokneam' (Joshua xix. 11). The ford of the river was always the boundary between the tribes of Zebulun and Issachar. The effect of this has already been pointed out in making Jokneam a town of the Kohathites, and transferring it to Ephraim.

The three Merarite towns which, by Joshua's allocation, remained, were: Kartah (the Kattath of Joshua xix. 15), now *Kâna*, nine miles north of Nazareth; Dimnah, which, from not being mentioned as one of the twelve towns of Zebulun (Joshua xix. 10–16), is wrongly thought to have been Rimmon; and Nahalal, now *Ain Mâhil*, in the same range of hills as Nazareth.

In place of these we have Rimmono, in the same division, built at a river-pass to the north of Cana-in-Galilee, now *Rummâneh*, and Tabor, showing a reduction of one in the number of the exchanges.

Tabor was one of the sixteen cities of Issachar, and was built on the top of the well-known hill of that name,

six miles east of Nazareth. There are still to be seen on its summit, scattered in indiscriminate confusion, walls, arches, and foundations (apparently of dwelling-houses), all of which are surrounded by the remains of a thick wall. This was the city newly given to the Merarites out of the country of Issachar, in place of two others in Zebulun of which they were deprived.

Of the four towns in Zebulun originally granted to them, but one remained, Rimmon or Rimmono; another was transferred to a neighbouring country, a third was chosen from a contiguous division, and one was altogether dropped. The net result was that the total number of cities occupied by the Merarites was reduced from twelve to ten.

(*e*) Omitting the six cities of refuge and the twelve priestly towns as being (with the omissions of Gibeon and Juttah) unchanged, the thirty purely Levitical cities were, by David and his advisers, reduced to twenty-six in number. This reduction of four[1] would greatly facilitate the work of revision, as it would be easier to remove a body of Levites from any locality, and to give the land and houses to the laity, than it would be to reverse the process. In the four cases where this was done, Aner, Bileam, Hukkok, and Tabor, the removal of the original Israelites to other sites was accompanied by giving them the vacated towns of Kibzaim, Taanach, Gath-rimmon, Helkath, Kartah, and Nahalal, the transfer from Engannim to Anem being probably to an unoccupied site.

[1] The superseded towns were Aijalon and Gath-rimmon of Dan, Kibzaim of Ephraim, and Nahalal of Zebulun.

The whole process shows that, in the opinion of the authorities, the Levites had been enjoying an undue share of the national property. If we look at the number of Canaanite towns distributed after the conquest, we shall be struck by a seemingly great anomaly. Several of the tribal divisions are given in their boundaries only, and we cannot tell how many towns these boundaries enclosed.

In seven of the eleven divisions the number of cities contained in each is given in totals. These numbered in all 227 towns or agricultural hamlets, solitary farmsteads being unknown in Palestine. Of these 227 towns, 34 were given either to the priests or Levites, being nearly one-sixth of the whole, instead of one-eleventh.

This undue disproportion is, however, lessened by the fact that the Levitical towns had a limited commonage attached to each, of from 500 to 1,000 yards in circumference, which was not the case in other collections of houses. The idea evidently was that the priests and Levites should approximate to the urban rather than to the rural type of character, and represent a higher culture and civilization.

With the growth of the nation and an increased pressure of population, popular discontent at such an arrangement was sure to arise. It was in order to meet this and to leave no seeds of dissatisfaction in the people's minds that David carried out his revision of the Church's property, and reduced the Levitical and priestly towns from 48 in number to 42, which is the total of the names in 1 Chron. vi.

In this way he hoped to prepare for the peaceful reign of his son, then about 18 years of age. The removal of these grievances against the ecclesiastics would be possible to their veteran leader, and might not be so to his successor, while his well-known and tried sympathy with the clergy of his day would render acceptable to them changes that would be sure to be resented as coming from Solomon.

These are the motives with which we may credit David in his difficult and gigantic task. All was done in preparation for, and in anticipation of, the building of the Temple, and of the contented labour in it of the 38,000 Levites (1 Chron. xxiii. 3) whom the census had revealed, all of whom were, in one department or another, called to its service.

18. It was with a statesman's prescience that David made these various preparations for the government of the country after his decease. A large share of the financial prosperity and political progress that characterized Solomon's reign is to be credited to him. The changes and developments initiated by him were gradually introduced. Thus the geographical changes and the reorganization of the legal work of the country was probably carried out during the first three years of Solomon's reign, and before the work of building the Temple had begun.

During these years an event of family history occurred which had large consequences. It was the request by Adonijah for Abishag the Shunamite. This at once

aroused the somewhat unreasoning wrath of Solomon, and was followed by the immediate execution of Adonijah and Joab,[1] and by the deposition of Abiathar, who was banished to his estate at Anathoth. With him his son Ahimelech disappears from the page of history.

It was the daily duty of the High-priest to burn incense before the ark of the Covenant at the time of the morning and evening sacrifice, the while the priests without blew with silver trumpets till the burnt-offerings were consumed (2 Chron. xxix. 28). It is apparent that by the summary discharge of Abiathar this principal duty could no longer be performed, as, till the time of the Maccabees, no other than the High-priest performed this duty. In New Testament times it was discharged by a priest chosen daily by lot (Luke i. 10).

It does not seem that Abiathar had anything to do with the request of Adonijah, though he had been implicated in his previous attempt to seize the throne (1 Kings i. 27). His dismissal from office was, therefore, an act of State policy, as it solved the difficulty of there being a dual High-priesthood in Israel.

[1] As Joab's mother was David's sister, he was cousin to Solomon. His violent death at the altar raised a strong feeling of revulsion amongst the members of his own family and clan. These were descendants of Shelah, eldest surviving son of Judah (1 Chron. iv. 21). Owing to the feeling engendered, a number of them migrated to Moab, where they rose to power, and are said to have 'had dominion.' The migration must have been that of a considerable body, as on the restoration, several centuries later, 2,812 returned, 'children of Pahath-Moab (=governor of Moab), of the children of Jeshua and Joab' (Ezra ii. 6). Two hundred others returned from Babylon with Ezra (viii. 4). In these lists the Shilonite family of Pahath-Moab is uniformly associated with others of the tribe of Judah.

For a short time the service of burning incense in the Tabernacle must have been discontinued, as Zadok served the Tabernacle at Gibeon, where, however, there was no golden altar, and incense was not offered.

In this crisis it would seem that a resolution was taken to close the worship at Gibeon, but to do so with all the wealth of ceremony and of sacrifice of which the case admitted.

Solomon himself attended the closing services, and provided a thousand burnt-offerings for sacrifice (1 Kings iii. 4). The Tabernacle was then, presumably, taken down and carried to Jerusalem, where its golden furniture furnished models for similar articles to be constructed by Hiram. Having served this purpose, the gold of which they were made was doubtless melted down and formed a part of the new service; it being a principle of Hebrew ritual that anything once dedicated to the service of Jehovah might not be put to any other use.

When Solomon returned to Jerusalem he presented himself before the Tabernacle, standing in the porch thereof. At the same time burnt-offerings were made on Moriah, for which doubtless Zadok the priest offered the necessary incense before the altar of incense.

Every difficulty had now been overcome. The long reign of schism was ended. The time was ripe for the building of the Temple. The plans were prepared, the Temple service organized, the ground levelled, and on the 2nd day of the month Zif (= May) the building was begun (1 Kings vi. 1).

Seven years after this the Temple was dedicated to the

service of Jehovah, by transferring to it, with great pomp and sacrificial ceremony, the ark and the tent of meeting and all the holy vessels that were in the tent on Ophel (1 Kings viii. 4). These last were placed in its treasuries, the ark given its place in the innermost sanctuary, while the wood of the Tabernacle would be consumed in the fires of the great altar.

Thus, in the tenth year of Solomon's reign, did the Tabernacle worship cease: the construction of Moses in the wilderness having served the purpose of God, as the place of meeting with man, through the space of nearly three hundred years.[1]

[1] This statement is made upon the conclusion that the 480 years of 1 Kings vi. 1 date from the descent into Egypt, and not from the Exodus.

According to the Septuagint the stay of the Israelites in Egypt was one of 215 years. This gives an interval, on the basis above suggested, of 265 years between the Exodus and the founding of the Temple.

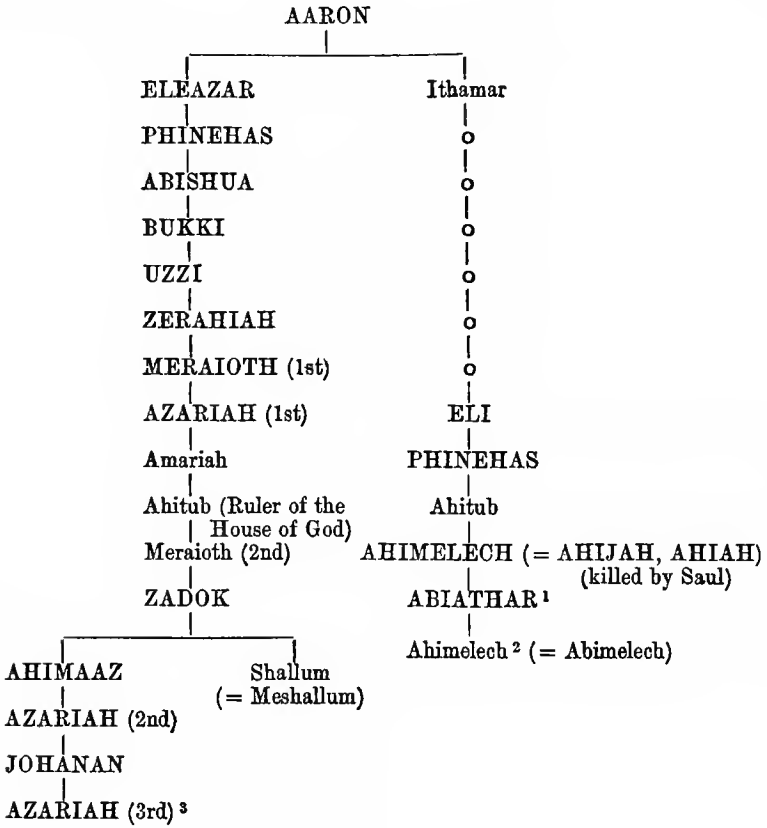
From Egyptian chronology we learn that Ramases II., the Pharaoh of the oppression, died B.C. 1281. There were no Israelites in Canaan when Ramases III. took Hebron and other towns, B.C. 1250–1230. They would be then in the *Negeb*.

From Babylonian chronology we get our first fixed biblical date, which is the fall of Samaria in 721 B.C. Working back from this we find that Samuel was alive in 1050, and that the Temple was begun about 1016 B.C.

GENEALOGICAL TABLE

Of the Family of Aaron, to the opening of Solomon's Temple.

The names given in capitals are those of men known to have been anointed High-priests.



[1] Deposed by Solomon (1 Kings ii. 27).

[2] I do not think that the theory of a copyist's thrice-repeated transposition of names in 2 Sam. viii. 17, and 1 Chron. xviii. 16; xxiv. 6, is tenable, but to be based upon a non-apprehension of the official relations which, from early times, existed between the High-priest and his eldest son.

As the slightest accidental defilement—a dream is given in the Talmud as an instance—disqualified the actual High-priest from officiating on the great day of Atonement and at the festivals, it was necessary to have a second High-priest in reserve, prepared to take his place. This place could only be taken by his eldest son, as the prospective High-priest.

There being in the Law no age fixed as that at which the sons of Aaron, in the direct line, were to enter upon their duties,* the eldest son of the High-priest, when still a young man, was often associated with his father in these responsibilities.

Of this we have an illustration in the case of Abiathar, who in Luke ii. 26 is spoken of as High-priest, when the contemporary histories leave us in no doubt that his father was still alive and held office.

So, again, with Ahimelech, who assisted David in the formation of the priestly courses (1 Chron. xxiv. 3). He was the son of the Abiathar just mentioned, and was given the name of his murdered grandfather. At the time that he was thus engaged, as the representative of the house of Ithamar, his father still lived, and survived to the reign of Solomon (1 Kings ii. 27). If we reckon a second Ahimelech, who fell, with the deposition of his father, under Solomon's edict, there is not any need to alter the text of either Samuel or Chronicles, but 'Ahimelech the son of Abiathar' may stand as David's 'priest,' i.e. High-priest, during his father's lifetime. The statement that he was so is repeated in 1 Chron. xviii. 16, though in this passage he is called Abimelech.

It is evident that in cases such as these, contributory causes might be the ill-health of the senior member of the family, the greater capacity of the younger member, and the favour of the reigning sovereign shown toward one person rather than another.

[3] 'He it is that executed the priest's office in the temple that Solomon built in Jerusalem' (1 Chron. vi. 10).

The Chronicler (1, vi. 4–15), having traced the succession of High-priests down to Azariah III., abruptly ends the line with the above note. In verse 11

* The High-priest Aristobulus, after having officiated in the Temple, was murdered by Herod, at the age of 17 (Josephus, *War*, I. xxii. § 2).

he resumes the line of succession at Azariah I., and traces it through Shallum, the second son of Zadok, to the time of the Captivity. This is confirmed by the record of Ezra, who was of the High-priestly family of the line of Shallum (vii. 1–5).

From the fact that, for the birthright privileges of Shallum and his descendants, the Chronicler went back seven or eight generations (from Azariah III. to Azariah I.), the inference may be drawn that it was at *that* point that the line of official descent had been broken in the time of the Judges, by the introduction of the line of Ithamar in the person of Eli.

PART II.

THE TRIPLE CUBIT OF BABYLONIA,

WITH RECONSTRUCTION OF THE SENKEREH TABLET,

AND

RESTORATION OF THE SCALE OF GUDEA.

GLOSSARY

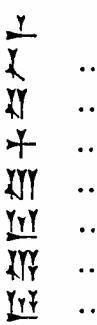
OF PRINCIPAL CUNEIFORM CHARACTERS USED IN THE SENKEREH TABLET.

Numerals.

=		1.
...	...	2.
...	...	3.
or	...	4.
...	...	5.
...	...	6.
...	...	7.
...	...	8.
...	...	9.
...	...	10.
...	...	11.
...	...	12.
...	...	20.
...	...	30.
...	...	40.
...	...	50.
...	...	60.

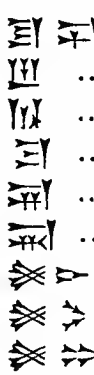
Note.—For the differing values of the single upright wedge, see the first three columns of Diagram V. p. 116.

Fraction Signs.



=		$\frac{1}{4}$
...	...	"third."
...	...	$\frac{1}{3}$
...	...	$\frac{1}{2}$
...	...	$\frac{2}{3}$
...	...	$\frac{3}{4}$
...	...	$\frac{5}{6}$
...	...	$\frac{7}{8}$

Value Signs.

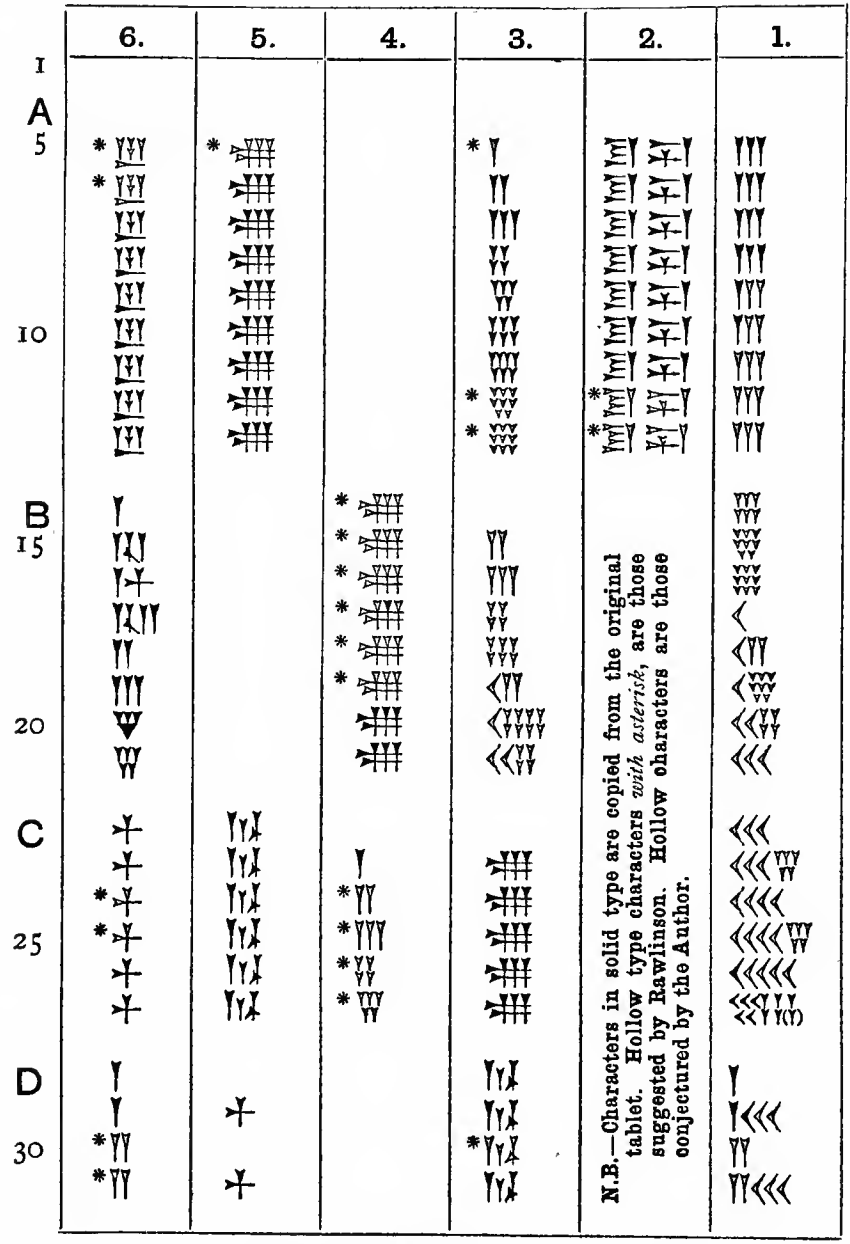


...		The Sossus.
...	...	3 sossi.
...	...	The Palm.
...	...	3-palm Ell.
...	...	4-palm Ell.
...	...	5-palm Ell.
...		3-ell Reed.
...		4-ell Reed.
...		5-ell Reed.

Arithmetical Sign.

... ... 'and' or plus, represented by +.

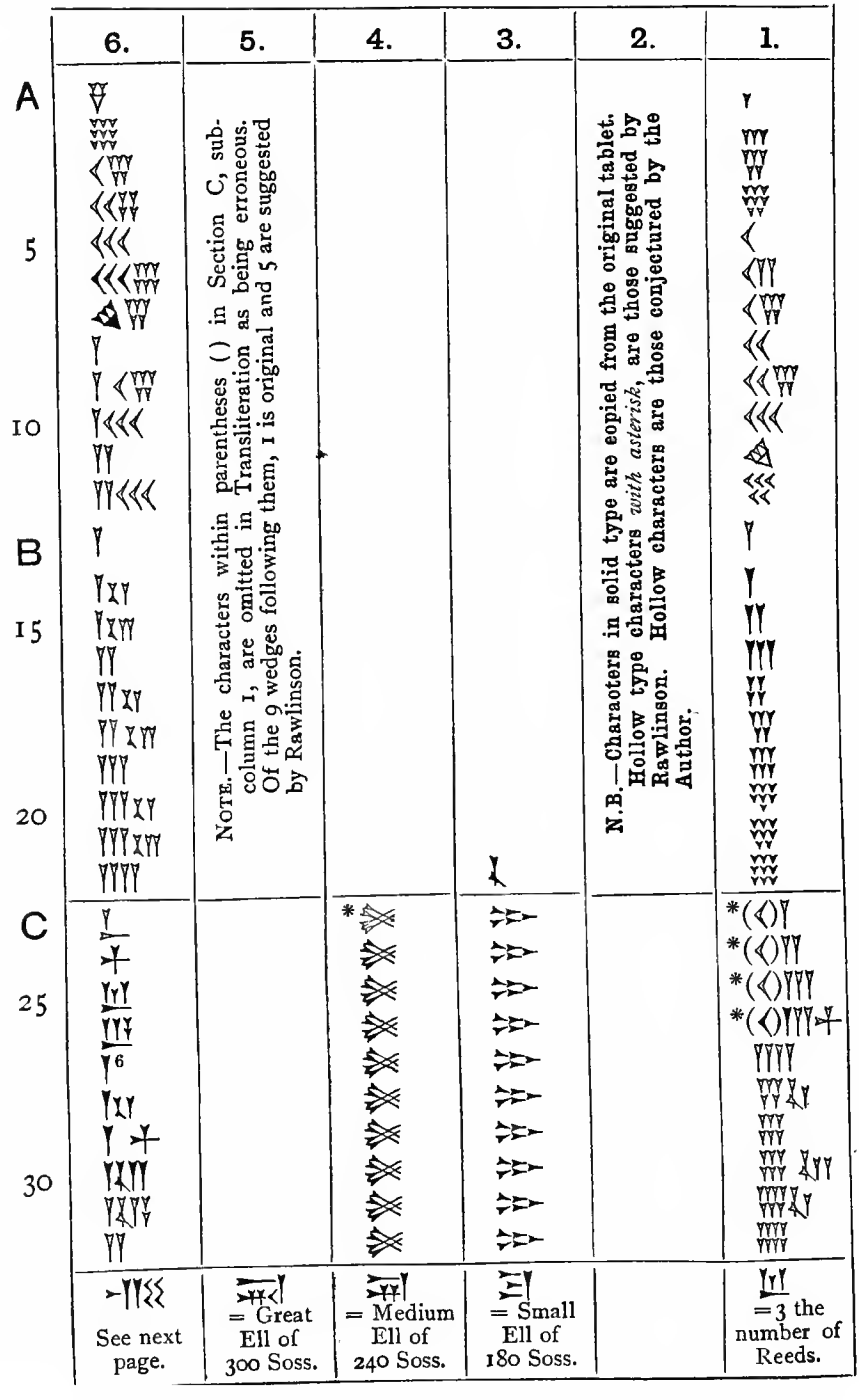
N.B.—In the subsequent representation of each of the four Columns of the Tablet, modern characters corresponding with the ancient ones are placed on the page following.



NOTE.—1. The character in parenthesis ( ) in line 27, sub-column 1, is superfluous.

KEY. Number of Sossi.	6	5.	4.	3.	2.	1.	
				Lines			I
$3\frac{1}{3}$	$\frac{1}{20}$ P.	+		^{180}I	Sossi	^{60}3	5
$3\frac{2}{3}$	,,	+		2	,,	3	
4	,,	+		3	,,	3	
$4\frac{1}{3}$	,,	+		4	,,	3	
$4\frac{2}{3}$	,,	+		5	,,	3	
5	,,	+		6	,,	3	10
$5\frac{1}{3}$	,,	+		7	,,	3	
$5\frac{2}{3}$	,,	+		8	,,	3	
6	,,	+		9	,,	3	
6	^{10}I			Soss		6	
8	I$\frac{1}{3}$		+	2		8	15
9	I$\frac{1}{2}$		+	3		9	
10	I$\frac{2}{3}$		+	4		10	
12	2		+	6		12	
18	3		+	12		18	
24	4		+	18		24	20
30	5		+	24		30	
30	$\frac{1}{2}$	Palm				30	
35	$\frac{1}{2}$	,,	^{12}I	+		35	
40	$\frac{1}{2}$	,,	2	+		40	
45	$\frac{1}{2}$	,,	3	+		45	25
50	$\frac{1}{2}$	,,	4	+		50	
55	$\frac{1}{2}$	,,	5	+		55	
60	I			Palm		I	
90	I	$\frac{1}{2}$		,,		I + 30	
120	II			,,		II	30
150	II	$\frac{1}{2}$		,,		II + 30	

NOTES.—2. The conjectured character in sub-column 4, line 14, Section B, is omitted as superfluous. 3. For values of ^{180}1, ^{60}3, ^{10}1, and ^{12}1, see Diagram V. p. 116.

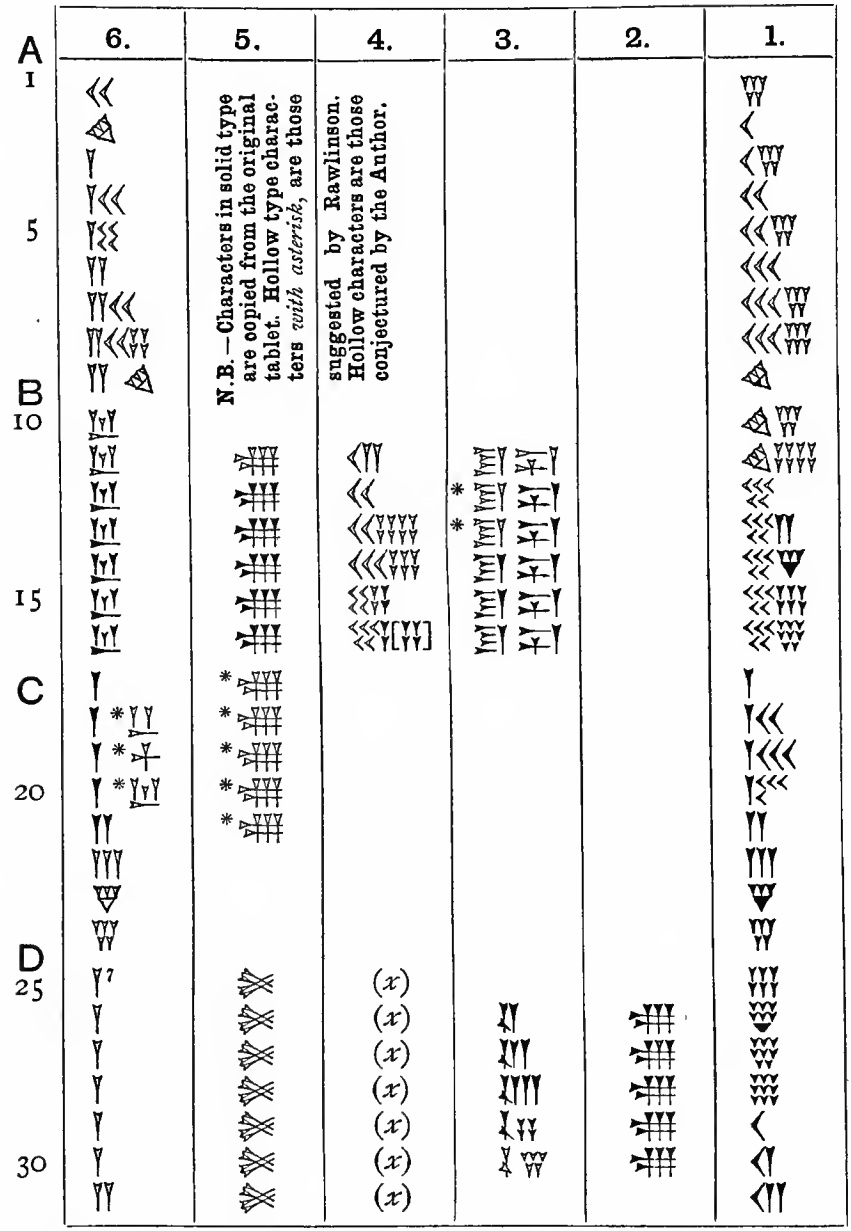

6.
5.
4.
3.
2.
1.
A
5
10
B
15
20
C
25
30
6
NOTE.—The characters within parentheses ( ) in Section C, sub-column 1, are omitted in Transliteration as being erroneous. Of the 9 wedges following them, 1 is original and 5 are suggested by Rawlinson.
N.B.—Characters in solid type are copied from the original tablet. Hollow type characters with asterisk, are those suggested by Rawlinson. Hollow characters are those conjectured by the Author.
See next page.
= Great Ell of 300 Soss.
= Medium Ell of 240 Soss.
= Small Ell of 180 Soss.
= 3 the number of Reeds.

KEY. No. of Sossi. ←	6.	5.	4.	3.	2.	1.	
3 = 3 × 1	3					1	1
9 = 3 × 3	9					3	
15 = 3 × 5	15					5	
24 = 3 × 8	24					8	
30 = 3 × 10	30					10	5
36 = 3 × 12	36					12	
45 = 3 × 15	45					15	
60 = 3 × 20	60					20	
75 = 3 × 25	75					25	
90 = 3 × 30	90					30	10
120 = 3 × 40	120					40	
150 = 3 × 50	150					50	
180 = 3 × 60	1^3				[I P.]	I	
						[I +]	
240 − 3 × 80	$1\frac{1}{3}$					1 [digit]	15
300 = 3 × 100	$1\frac{2}{3}$					2 „	
360 = 3 × 120	2				[II P.]	3 „	
420 = 3 × 140	$2\frac{1}{3}$					4 „	
480 = 3 × 160	$2\frac{2}{3}$					5 „	
540 = 3 × 180	3				[III P.]	6 „	20
600 = 3 × 200	$3\frac{1}{3}$					7 „	
660 = 3 × 220	$3\frac{2}{3}$					8 „	
720 = 3 × 240	4			$\frac{1}{3}$	[IV P.]	9 „	
180 = 3 × 60	$\frac{1}{4}$ [of 720]		⋘	▽		I	
360 = 3 × 120	$\frac{1}{2}$		Reed	3-Ell		II	25
540 = 3 × 180	$\frac{3}{4}$		„	„		III	
630 = 3 × 210	$\frac{7}{8}$		„	„		III$\frac{1}{2}$	
720 = 3 × 240	I		„	„		IV	
960 = 3 × 320	$I\frac{1}{3}$		„	„		V$\frac{1}{3}$	
1,080 = 3 × 360	$I\frac{1}{2}$		„	„		VI	30
1,200 = 3 × 400	$I\frac{2}{3}$		„	„		VI$\frac{2}{3}$	
1,320 = 3 × 440	$I\frac{5}{6}$		„	„		VII$\frac{1}{3}$	
1,440 = 3 × 480	II		„	„	[VIII P.]	VIII	
2,160	720						

Note.—In sub-column 2 the Roman numerals are introduced to complete the system to the eye.

⟩ = Palm = 60
▽ = 60 × 5 = 300
▽ = 60 × 4 = 240
⋘ = 40 × 3 = 120—720 × 3 = 2160.

[Total XII Palms.]



NOTES.—1. The 4 characters within square brackets on line 16 are deemed to be superfluous. 2. The conjectured fractions in sub-column 6, lines 18 and 20, are replaced by others in the left panel. 3. The 5 conjectured characters in Section C, sub-column 5, are found to be unnecessary.

KEY. Number of Sossi. ←	6.	5.	4.	3.	2.	1.	
20 = 4 × 5	20					5	1
40 = 4 × 10	40					10	
60 = 4 × 15	60					15	
80 = 4 × 20	80					20	
100 = 4 × 25	100					25	5
120 = 4 × 30	120					30	
140 = 4 × 35	140					35	
144 = 4 × 36	144					36	
160 = 4 × 40	160					40	
180 = 4 × 45	Small Ell.					45	10
192 = 4 × 48	,,	+	12	Sossi		48	
200 = 4 × 50	,,	+	20	,,		50	
208 = 4 × 52	,,	+	28	,,		52	
216 = 4 × 54	,,	+	36	,,		54	
224 = 4 × 56	,,	+	44	,,		56	15
232 = 4 × 58	,,	+	52	,,		58	
240 = 4 × 60	I [Me. E.]					I [Palm]	
320 = 4 × 80	$1\frac{1}{3}$,,					I + 20	
360 = 4 × 90	$1\frac{1}{2}$,,					I + 30	
400 = 4 × 100	$1\frac{2}{3}$,,					I + 40	20
480 = 4 × 120	2 ,,					II	
720 = 4 × 180	3 ,,					III	
960 = 4 × 240	4 ,,					IV	
1,200 = 4 × 300	5 ,,					V	
1,440 = 4 × 360	I					VI	25
1,680 = 4 × 420	I	Reed	4-Ell	$\frac{1}{3}$ [of 720]	+	VII	
1,920 = 4 × 480	I	,,	,,	$\frac{2}{3}$	+	VIII	
2,160 = 4 × 540	I	,,	,,	$\frac{3}{3}$	+	IX	
2,400 = 4 × 600	I	,,	,,	$\frac{4}{3}$	+	X	
2,640 = 4 × 660	I	,,	,,	$\frac{5}{3}$	+	XI	30
2,880 = 4 × 720	II	,,	,,			XII	

NOTE.—The characters in Section C, sub-column 4, are retained as written. Those conjectured in the left panels of Columns III, Section D, sub-column 4, and II, Section C, sub-column 3, have been reduced in size and value.

N.B.—Characters in solid type are copied from the original tablet. Hollow type characters *with asterisk*, are those suggested by Rawlinson. Hollow characters are those conjectured by the Author.

KEY. No. of Sossi.	6.	5.	4.	3.	2.	1.
20 = 5 × 4	20					4
25 = 5 × 5	25					5
30 = 5 × 6	30			Of Palm		6
35 = 5 × 7	35			,,		7
40 = 5 × 8	40			,,		8
45 = 5 × 9	45			,,		9
50 = 5 × 10	50			,,		10
55 = 5 × 11	55		Sossi	,,		11
60 = 5 × 12	1 P		—			12
70 = 5 × 14	1	In Gt. Ell	[+] 10	,,		14
80 = 5 × 16	1	,,	[+] 20	,,		16
90 = 5 × 18	1	,,	[+] 30	,,		18
100 = 5 × 20	1	,,	[+] 40	,,		20
110 = 5 × 22	1	,,	[+] 50	,,		22
120 = 5 × 24	2	,,				24
180 = 5 × 36	3	,,				36
240 = 5 × 48	4	,,				48
300 = 5 × 60	5	,,	[1 Gt. Ell]			1 [Palm]
360 = 5 × 72	6	,,	[1 1/6 ,,]			1 + 12
420 = 5 × 84	7	,,	[1 2/6 ,,]			1 + 24
480 = 5 × 96	8	,,	[1 3/6 ,,]			1 + 36
540 = 5 × 108	9	,,	[1 4/6 ,,]			1 + 48
600 = 5 × 120	1/3 [of 1800]	Reed	5-Ell			II
900 = 5 × 180	1/2 ,,					III
1,200 = 5 × 240	2/3 ,,	,,	,,			IV
1,500 = 5 × 300	5/6 ,,	,,	,,			V
1,800 = 5 × 360	1 [Gt. Reed]	,,	,,			VI
2,400 = 5 × 480	1 1/3 ,,	,,	,,			VIII
2,700 = 5 × 540	1 1/2 ,,	,,	,,			IX
3,000 = 5 × 600	1 2/3 ,,	,,	,,			X
3,300 = 5 × 660	1 5/6 ,,	,,	,,			XI
3,600 = 5 × 720	II ,,	,,	,,			XII

= 3 = multiplier. 6, each = 360 × 6 = 2160.

= 4 = multiplier. each = 360 × = 2 = 720 ÷ = 10 = 72 × 40 = 2880.

[= 2] Duplicate.

= 5 = multiplier. = 3600.

= ? Colophon.

THE SENKEREH MATHEMATICAL TABLET.

ANALYSIS, SHOWING OCCURRENCES OF THE SINGLE WEDGE HAVING DIFFERENT VALUES, IN THE TABLET AS NOW RECONSTRUCTED.

DIAGRAM V.

Description.	Relative Value.	Distinguish as	Occurrences. In Column I. Sub-Col.	In Column I. Lines.	In Column II. Sub-Col.	In Column II. Lines.	In Column III. Sub-Col.	In Column III. Lines.	In Column IV. Sub-Col.	In Column IV. Lines.
Line...	$\frac{1}{180}$ of Palm	180	III	5–13						
Sossus	$\frac{1}{60}$ of Palm	60	I	5–31	I	1–12	I	1–16	I	1–17
			III	15–21	III	14–21		18–20	I	19–22
Twentieth of Palm* ...	$\frac{1}{20}$ of Palm	𒐜	VI	5–13			VI	1–9	IV	10–14
									VI	1–8
Twelfth of Palm	$\frac{1}{12}$ of Palm	12	IV	23–27						
Tenth of Palm	$\frac{1}{10}$ of Palm	10	VI	14–21						
Third of Palm or Digit...	$\frac{1}{3}$ of Palm	3			I	14–22				
The Palm	*Fundamental*		VI	22–31	I	13	I	17–31	I	18–32
						23–32			VI	9–22
Small Ell...	3 Palms	3 & 𒐜			VI	13–22	VI	10–16		
Medium Ell†	4 Palms	4			IV	33	VI	17–24		
Large Ell*†	5 Palms	5			V	33			V	9–22
Small Reed	4 Small Ells	6			VI	23–32				
Medium Reed	6 Medium Ells	7					VI	25–31		
Large Reed	6 Large Ells	8							VI	23–32

* This measure is shown in characters, not in figures.

† These measures are given also in their fractions: in Column III., Section D, the fractions are those of a Small Reed of 720 Sossi, giving Medium Ells; in Column IV., Section C, the fractions are those of a Great Reed of 1,800 Sossi, giving Great Ells, in the progression of figures, as shown in the key.

THE SENKEREH MATHEMATICAL TABLET.

TABULATED SCALE OF RELATED MEASURES AS DEDUCED FROM THE TABLET AS NOW RECONSTRUCTED.

DIAGRAM VI.

Description.	Line.	Soss.	Twelfth of Palm.	Tenth of Palm.	Third of Palm.	Palm.	Small Ell.	Medium Ell.	Large Ell.	$1\frac{1}{3}$ Small Reed.	Medium Reed.	Large Reed.	$1\frac{1}{2}$ Double Small Reed.	Double Medium Reed.	Double Large Reed.
Line	1														
Soss	3	1													
Twelfth of Palm ...	15	5	1												
Tenth of Palm	18	6	$1\frac{1}{5}$	1											
Third of Palm	60	20	4	$3\frac{1}{3}$	1										
Palm	180	60	12	10	3	1									
Small Ell	540	180	36	30	9	3	1								
Medium Ell	720	240	48	40	12	4	$1\frac{1}{3}$	1							
Large Ell	900	300	60	50	15	5	$1\frac{2}{3}$	$1\frac{1}{4}$	1						
$1\frac{1}{3}$ Small Reed	3240	1080 720	216	180	54	18	6	$4\frac{1}{2}$	$3\frac{3}{5}$	1					
Medium Reed	4320	1440	288	240	72	24	8	6	$4\frac{4}{5}$	$1\frac{1}{3}$	1				
Large Reed	5400	1800	360	300	90	30	10	$7\frac{1}{2}$	6	$1\frac{2}{3}$	$1\frac{1}{4}$	1			
$1\frac{1}{2}$ Double Small Reed ...	6480	2160 1440	432	360	108	36	12	9	$7\frac{1}{5}$	2	$1\frac{1}{2}$	$1\frac{1}{5}$	1		
Double Medium Reed	8640	2880	576	480	144	48	16	12	$9\frac{3}{5}$	$2\frac{2}{3}$	2	$1\frac{3}{5}$	$1\frac{1}{3}$	1	
Double Large Reed ...	10800	3600	720	600	180	60	20	15	12	$3\frac{1}{3}$	$2\frac{1}{2}$	2	$1\frac{2}{3}$	$1\frac{1}{4}$	1

NOTE.—The equivalents of the Small Reed and Double Small Reed are given above in $1\frac{1}{3}$ of each, as the interior division of Column II. is into three parts, whereas the arrangement of Columns III. and IV. is in two parts.

CHAPTER I.

ON THE RECONSTRUCTION OF THE SENKEREH TABLET.

1.

IT is deeply interesting to know how men's minds worked when the world was young. And it is to Babylonia —the cradle of the human race—that we must go for some evidence of this. The low alluvial plains at the head of the Persian Gulf are covered with the remains of primitive cities, palaces, temples, and cemeteries; from one of which, fifty years ago, was disinterred the little slab of unbaked clay which is now to engage our attention, as embodying the world's earliest known arithmetical system.

Senkereh is a small Arab village standing on the site of the ancient city of Larsam or Larsa, in Southern Babylonia. Not far away from its series of mounds are the ruins of Warka—the Erech of Genesis x. 10—and of Mukayyar, once the home of the Patriarch Abram. Here, in 1850, Mr. W. K. Loftus discovered a great number of tombs containing baked-clay tablets and pottery, the former with rude Cuneiform inscriptions impressed upon one or both sides.[1] His most valuable discovery was

[1] *Chaldea and Susiana*, 1857, p. 255.

a 'table of squares,' which, with the late Sir Henry Rawlinson's aid, was seen to confirm the statement of Berosus the Chaldean, that the Babylonians made use of a sexagesimal notation, the unit of which was termed a *sossus*, as well as of a decimal notation.

The early investigations into the contents of this tablet were confined to its reverse side, which is in a state of almost perfect preservation, and which, from its geometrical method, is of comparatively easy comprehension. Its other side, the obverse, is in much worse condition, nearly one-half of its figures and ideographs being flaked away.

Under Sir Henry Rawlinson's editorship the Trustees of the British Museum published a transcription of the tablet in Plate 37 of the fourth volume of their 'Cuneiform Inscriptions of Western Asia,' the second edition of which appeared in 1891.[1] The possible value of this tablet was early recognized. In 1868 Lenormant issued his 'Essai sur un Document Mathématique,' and in 1877 Professor Lepsius, of Berlin, published a monograph upon it, which may be seen in the library of the Society of Biblical Archæologists. Beside these, many other attempts were made to restore the missing figures, and to read the riddle of this literary sphinx. Hommel well expressed the general conviction of Assyriologists when he wrote (Hastings' *Dictionary of the Bible*, i. 218, *article* Babylonia), 'On the reverse of the tablet of Senkereh are given the squares and cubes of the cubit from the No. 1 up to 60 [this is a clerical error for 40], and on

[1] The tablet itself is numbered 92,698, and is in the British Museum.

the obverse the fractions and multiples of the cubit.' This much was perceived, but no more. Its reconstruction still remained for others to accomplish. The result to be attained seemed so exceedingly desirable that several months of application have enabled me to present an exposition of the obverse side of the tablet, which, though not complete to the smallest detail, still is so far consistent and harmonious with the existing impressions of the stylus as, I believe, to merit general acceptance.

When it is stated that each side of the tablet has a surface for writing of about six inches square ($7\frac{1}{4} \times 5\frac{3}{4}$ inches), and that 285 separate characters are still found on the obverse, and that these require the addition of an almost equal number which have been effaced, in order to complete the system, it will be seen that enormous difficulties have already been overcome in its transcription. The difficulties must have been insuperable but for the use of the microscope, a magnifying-glass having been almost certainly used in its construction. Why a work of such care and elaboration should not have been hardened by being baked, is one of those questions which it is easy to ask and impossible to answer.

Coming now to the contents of the tablet, we find that our first duty is to divide it horizontally into sections and longitudinally into sub-columns. This involves, of course, some acquaintance with its contents and with the value of each of its characters. This done, we find that there are, in each of its four columns, six sub-columns, the number of sections in each being either three or four.

Column I. (*Diagram IV.*).[1]

The first column is found to represent a series of arithmetical progressions, and is not, as are the other three, a column of multiplication, with the multiplier unexpressed. In extent it ranges from the smallest length-measure, that of the *line*, to half of each of the ells contained in the following columns. The way in which this minutest fraction is expressed is a very ingenious one. Three sossi are taken, and are repeated through nine lines. This is done in sub-column 1, and their equivalents in writing are set down opposite to them in sub-column 6. Between these two rows of characters, and in sub-column 3, there are impressed the gradual and progressive values of nine *lines* (Section A), with the sign for addition connecting them with the written figures to their left. The third line on the fifth diagram (p. 116) shows that, with the exception of the great ell, this is the only instance in which a written figure was taken to express a whole number or a fraction of a whole number; the idea to be conveyed being that three sossi were one-twentieth of a palm, a measure which could hardly have been distinguished in any other way than by having its own ideograph. This ideograph occurs only here in the tablet.

In this way six sossi are reached, and the first section is complete, it having been shown that there are three '*lines*' to each sossus.

[1] In an independent study of the Senkereh tablet it will be found advisable to take the diagrams in the order of their numeration, 1 to 4, rather than that of the columns.

In Section B the progression is a decimal one, and the later figures move forward in *tenths* of a palm. In Section C the progression is a duodecimal one, and the figures move forward in *twelfths* of a palm. To each of these sections the value of half a palm is devoted, and the table has now arrived at its true summit and goal, which was to show the whole palm, as hand-breadth, with all its accompanying fractions, except its principal one, which was reserved for Column II., where it appears on lines 14–22.[1]

Before closing the record, however, the scribe inserted another section, D, in order to show the relation which the palm bore to the subsequent columns. The palm of 60 sossi is therefore given as $1\frac{1}{2}$, 2, and $2\frac{1}{2}$ palms, thus leading us insensibly to its further developments, as now to be indicated.

Column II. (Diagram III.).

This is a column of multiplication, and is comparable to the second column in an ordinary multiplication table. Apart from the fact of the multiplier 3 being unexpressed, and from the bad condition of the upper part of the Cuneiform, it presents few difficulties.

In one respect, indeed, it differs from those following, and this singularity merits a moment's consideration. It is this:—Whereas the multiplicand in each of the Columns II., III., and IV. is the same, namely, twelve palms variously arranged and expressed, in Column II.

[1] It will not escape notice that the details of the digit in Section B are followed by their use in the fractions of Section C, Column II.

the working-out of the system is divided into two main divisions. In the former of these four palms are dealt with, in minute fractions, and are multiplied into small ells, each ell being of the length of three palms. In the latter, Section C, eight palms are dealt with in larger fractions, the total of both divisions being 12 palms each of 60 sossi × 3 = 2,160, a figure which is recorded at the foot of the column.

Columns III. and IV. (*Diagrams II. and I.*).

In these columns the unexpressed multipliers are 4 and 5 respectively, and with this key in his hand any scholar will be able to test for himself the correctness of the conclusions given and that of the restored figures. One item only of these columns needs to be referred to here. They, in common with Column II., are worked out to a higher denomination than ells. When a certain number of ells had been reached, the system developed into one of reeds, just as with us inches become feet and feet become yards. Unfortunately, the distinguishing mark of these reeds (i.e. that by which they were known one from another) has been effaced in all but one of the columns. The missing characters have been conjecturally restored in the left-hand panels of the diagrams, but these have no accepted authority, except in Column IV.

The Fractions of the Tablet.

One of the most fascinating aspects of the tablet is the way in which its fractions are expressed. Of these there

are a great number, and they afford us a simpler conception of the mathematical attainments of primitive man than can be got in any other way. The fractions used are these: $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{5}{6}$, and $\frac{7}{8}$. The improper fractions $\frac{3}{3}$, $\frac{4}{3}$, and $\frac{5}{3}$ are also used. For the mode of their expression I must refer to a later page, where it will be seen that a horizontal wedge, cut in half by an upright wedge, is the sign for $\frac{1}{2}$, and that this simple principle of the ocular demonstration of the fraction intended obtains throughout the whole series.

I may take leave to doubt whether, either the actual finger-breadth or the finger-length is ever here referred to as a factor of the palm, which, it will hardly be denied, was the 'fundamental' of this whole system of length-measures. Taking the palm as the original from which all other measures were derived, the tablet shows that six lesser lengths were derived from it, and that it was multiplied into six greater lengths. Amongst these twelve derivations the finger does not appear! What does appear, and what for convenience has been termed a 'digit,' on nine lines of Column II., is one-third of a palm, each unit being of the value of twenty sossi. These I take to have been adopted as the conventional length of the fore-joint of the thumb, which is ordinarily about one-third of the width of the palm, and may have been commonly used in a sparse population (as was the hand-breadth) for purposes of measurement. Disputes arising from this unscientific method would early compel the conventionalization of both measures.

A tribute of respect is due to the dead-and-gone sages

who, some five thousand years ago, worked out for themselves, and for us, this system of arithmetic. With only their right hand to guide them, they elaborated a system which in many respects is superior to that in use amongst ourselves. For theirs was at once decimal and duodecimal, and in their monetary system there could not have been the anomaly of having twelve pence in a shilling and twenty shillings in a pound without any power of simple co-ordination.

How closely they adhered to the human hand as the source and embodiment of their whole system may be seen in their appropriation of its five fingers to differing uses. *One* was the symbol of unity or completeness, and is used in twelve different relations on the face of the tablet, as shown in diagram No. V. *Two* was used for all purposes of duplication. Thus there were single reeds and double reeds of three varieties. The remaining integers, 3, 4, and 5, when multiplied together, gave them the 60 which Berosus chronicled, and which, being divisible either by 10 or 12, gave them in the sexagesimal system of notation a more simple and elastic system than our decimal one.

What I think may be considered as having been established by the present reading of the Senkereh tablet are these three points. That in the system which it represents—

(1) *The breadth of the hand-palm (conventionalized) was the fundamental of all length-measures.*

(2) *That there were three ell-lengths in simultaneous use, each probably in a different department of trade, like our own Troy and Avoirdupois weights.*

(3) *That the relation of these ells to one another was the relation of* 3, 4, *and* 5; *these having been the number of palms of which they respectively consisted.*

2.

Having thus given a bird's-eye view of the construction of the restored Senkereh tablet, and a brief summary of the conclusions to be drawn from it, it is now necessary to go over the field again with more especial reference to the arithmetical signs used, and to the characters, other than figures, which appear on its face.

The numerals themselves do not detain us, as, with one or two exceptions,[1] they are not more difficult of comprehension than are the later Roman figures, but the mode in which the fractions are expressed is not undisputed. To this, therefore, a brief space may be given.

In the system by which the various fractions of a whole number were at the first made visible to the eye, and given an abiding permanency, we have the solution of a deeply interesting problem. In order to attain these ends, the original method would seem to have been that of taking a single wedge, which was throughout the emblem of unity, and by treating it as such to convey to the mind, through the eye, the desired idea. This foundation wedge was generally treated horizontally, there being thus but one step from the work of the

[1] Of these exceptions that for 19 is the most unusual. It does not occur on the obverse of the tablet. The distinction between 4 and 40 is thus attained: = 4, = 40. See Glossary, p. 107.

hewer-of-wood to that of the ideal of the artist in clay. So placed, the prostrate unit was 'cut up' into its various component parts, and thus the intended effect was produced. The earliest application of this principle naturally would be to divide a single wedge into its 'halves'; and to do this in such a way as that a person at a distance, seeing the *graph*, would know what was intended.

The series would then be as follows:—

(1) = ½.

This sign occurs in each of the four columns of the tablet, and has everywhere the same relative value, that value being one moiety of some whole number, generally that of the one preceding it; e.g., in Column II., line 24, the 'half' is that of the immediately preceding total of 720 sossi. In Column III., line 19, the 'half' is that of the medium ell of 240 sossi, to which the whole section is devoted. In Column IV., lines 24 and 29, it is one 'half' of the great reed of 1,800 sossi, to the growth of which the whole section is devoted. As, however, Assyriologists are in full accord as to the meaning of this sign, there is no need to say more about it.

(2) = '*third.*' = ⅓. = ⅔.

This character, , when unassociated with any other, occurs but once on the face of the tablet. This is in Column II., line 22, where its undisputed appearance furnishes indubitable evidence and plays a most important part in the elucidation of the column. For we have here

the singular result that while the whole column is based upon a multiplicand of 12 palms (as are the others), and works out by multiplication to a total of reeds (as do the other columns), yet we have in this single character a suggestion of a division of its contents (other than the usual) into two parts of one and two reeds. The presence of this sign shows that its first division consisted of but one-third of the whole. Had this single figure been effaced by time, I do not see how the tablet could have been perfectly reconstructed.

In all other parts of the tablet the is accompanied by one or more index figures following it, to show how many 'thirds' were intended. This is indicated by a number of perpendicular wedges, which tell us whether *one* or *two* thirds are to be taken into account.

In Column III., lines 26–30, this system is still further extended, so as to reach the improper fraction of five-thirds, these being the fractions, in ells, of which the medium reed consisted before it reached the second unit. Four of these five characters are in the original, one only requiring to be added by conjecture.

(3) $= \frac{3}{4}$.

This sign occurs but once on the face of the tablet as the equivalent of three-quarters of a whole number. It is found in Column II., line 25, as one of a series of progressive fractions, and being in such good company its respectability can hardly be doubted. Its normal construction is also in its favour, as it is that of a horizontal wedge divided into quarters, three of which are indicated

by as many upright wedges, the middle wedge being taken to be in the centre of the prostrate one.

Allied to this character, both in form and significance, are two others. One of these occurs repeatedly in Column III., where in lines 12–16 (preceded by two conjectures) it stands as the sign for the 3-palm ell.

In the summary line of Column II., sub-column 1, line 33, is another instance of the use of a character similar in appearance to that under consideration. It is here taken to signify 'three,' that being the unusual number of reeds into which the whole multiplicand sub-column above it had been multiplied.

It is not certain that these three characters, so similar in meaning to one another, are exactly identical in shape. The three upright wedges in each of them may have been slightly differentiated in position, so as to give a distinctive character to each. In the case of the five occurrences on Column III., it may have been intended to convey that the small ell there was three-quarters the length of the ordinary or medium ell, just as the old English ell of 27 inches was three-quarters of a yard. This would then be its name, and no difference of structure would be required, the same sign serving for three-quarters of an integer and the three-quarter ell.

(4) $(x) = \frac{1}{4}$ (?).

The original sign for one-fourth does not now, unhappily, occur in any part of the tablet as an independent character. Its place in Column II., sub-column 6, line 23, where the

'system' of the tablet makes it imperative,[1] has been irremediably injured and the writing defaced.

On the principle of analogy and by acting on the rule already suggested as that by which the expression of all the fractions was arrived at, we may give to it the character of a horizontal wedge of which the fourth part is indicated by a wedge standing above it. Its place should be to the right of the centre. While, however, no instance of such figure is to be found, there are slight indications that the sign for one-quarter, when used in combination with other fractions, was a single perpendicular wedge. This will be seen in the next paragraph.

(5) $\frac{5}{6}$.

This sign actually occurs only in Column IV., lines 26 and 31, and conjecturally in Column II., line 31. These occasions enable us to determine its value with something like certainty, and to analyze its form in harmony with the examples and principles already laid down. Its composition would seem to have been determined by a union of two other fractions, thus :—

$\frac{1}{3}$.
$\frac{1}{4}$.
$\frac{1}{4}$.

These being added together will give the fraction of five-sixths.

[1] Its value is determined by the single wedge of one palm in sub-column 1, governed by the multiplier 3, producing $\frac{1}{4}$ of a small reed. No other fraction could have been used.

(6) $\frac{7}{8}$.

In close conjunction with the sign for three-quarters will be found that for seven-eighths, which seems to have been founded upon it. Of the one-quarter which remained when three had been cut off, to make the former, it was but necessary to halve the remainder to give the desired result of seven-eighths. This was accordingly done, but the additional wedge, instead of being placed *beside* the other, was written *above* it, thus signifying that of the original whole number, but one-eighth was excluded instead of one-quarter. It appears in Column II., line 26.

In closing this part of the subject I may say that I am quite aware that to some of the above-mentioned characters other meanings are given by Cuneiform scholars. I do not dispute the correctness of their interpretation. As, however, most characters of this early language have more than one meaning, and in some cases a great variety of meanings, I would urge that to those already accepted the values here given to these signs may be added. I do this upon the ground of the homogeneity of the whole document before us, which requires that in it these values, and these only, be read into the six signs which have already engaged our attention.

3.

We pass now, by a natural transition, to the consideration of the remaining characters of the tablet, i.e. those other than figures or arithmetical signs. These will merit the

most cautious and enlightened treatment, as it is upon their evidence that the whole metrological value of the tablet rests. As with ourselves a series of ledger accounts are dependent for the just appreciation of their figures upon the headings of their columns for pounds, shillings, and pence, so here. The six characters now to engage our attention correspond, *in their uses*, with the £ *s. d.* of commerce; and any error of interpretation, or feature that may be overlooked, will vitiate the whole scheme and render it worthless.

In order to distinguish these six determinatives-of-values from the 'signs' already dealt with, they are here named *ideographs*, though this term is not perhaps philologically correct. They are taken in the order of their supposed length-values, rising from the lesser to the greater.

(1) = *the Sossus* (*šu-si*).

The union of these two characters is approved by Mr. Theo. G. Pinches, LL.D., who writes: 'These two characters cannot, when side by side, be separated, and in that case they stand for hand-horn, the meaning "hand" and the meaning "horn."'

Avoiding all possible controversial matter as to how this combination came afterwards to be interpreted into its recognized and cognate meaning or meanings, I wish to confine myself to the sole evidence of the Senkereh tablet, from the first column of which we learn that the fundamental measure of Babylonian metrology was divided into sixty spaces. These, we may suppose, to have been

marked by notches on a stick or rule, or by cuttings in a clay tablet. It is not improbable that these notches, or rather the spaces between them, were originally called 'horns,' and as the measure of the hand was the basis of the system, there is every reason for the application of the term 'hand-horn' to the length-measure which Berosus the Chaldean tells us was the original of the Babylonian system of metrology.

This compound ideograph occurs no less than ten times in a perfect state on the tablet, at other times requiring to be read-in as part of the sub-columns in which varying numbers of sossi are given. This is noticeably the case in the first twelve lines of Column II., sub-columns 1 and 6. A still better example of its omission, all the existing figures being authentic, may be found in Column IV., sub-column 1, lines 1–17, with the denominator unexpressed. In this case the twelve in sub-column 3 are taken to belong to the figures on their right.

Diagram V. shows that no single ideograph has so many occurrences on the tablet as that for the *sossus*. This is what should have been expected when its premier position is remembered. It ought to be no detriment to this aspect of the case that the ancient artist has sometimes forgotten to head his sub-columns with the yard or foot or inch of his day, or, likelier still, has failed to find room for it. The coherency of the whole tablet should be our sufficient warrant for understanding these governing signs when not expressed.

(2) = $\frac{1}{20}$ *of Palm.*[1]

The measure next larger in size to the *soss* was a measure of three sossi. It is almost the only length-measure of the tablet which is not somewhere represented by a single wedge. Its only occurrence is in Column I., sub-column 6, lines 7–13.

The interpretation of this character is based upon the fact that Column I. is throughout its length a table of equivalents, every item in sub-column 6 being the equation of the corresponding item in sub-column 1. This principle of constructing Column I. carries with it the meaning of this ideograph, both the characters and appearing in all their original clearness in lines 7 and 8.

The special value and use of a measure of this length will presently appear in the fact that it was the one-sixtieth part of the small ell.

(3) = *the Palm* (*gar*).

Proceeding in the same direction as hitherto, from smaller to larger, we come to the ideograph for palm or hand-breadth. As this was the 'fundamental' from which all other measures were derived, either by division or multiplication, its written sign has more than an ordinary interest for the student.

The character itself appears in Columns I. and IV.

[1] The conventional value of is the fraction $\frac{5}{6}$. This is arrived at by assuming that the first upright wedge in Column I., on line 14, has 60 constituent parts, of which 9, each of the value of 6 parts, are given in Section A, sub-column 3. The true character for $\frac{5}{6}$ has already been given in (5), p. 130.

In the former it is shown in every line of Sections C and D, having been effaced in but one of ten occurrences. It is here used in conjunction with the various fractions that constitute the hand-breadth, these rising from half-a-palm to $2\frac{1}{2}$ palms.

In Column IV. its use is slightly different. It occurs on lines 2–8, in order to give the value of the figures in sub-column 6. These are, in this way, shown to be so many sixtieths of the palm, and therefore *sossi*. In lines 10–14 it serves a similar purpose for the figures in sub-column 4.

Its non-recital on line 9 is instructive. That being the line on which the 60 sossi or palm was reached in the progression, no characterization was necessary, the single wedge (representing the completed palm) appearing in sub-column 6. Thus does the intentional omission of a character here tend to give validity to its insertion both above and below. Its insertion would have been misleading.

(4) (*or*) = 3-*palm Ell.*

 = 4-*palm Ell.*

[1] = 5-*palm Ell.*

These three characters are taken together here, as they not only mutually illustrate each other's construction, but are found together at the foot of Column II., where they occupy a position of isolation on line 33, as indices of the various columns, or summaries of their contents.

[1] It is unnecessary to remark that the fish-tail is here the sign of an extra wedge.

First, as to their plan of construction. It will be seen that the upright wedge is common to them. This stands to the left in each character, and is the symbol of unity or completeness.

At right angles to this are, in one case 3, in another 4, and in another 5 horizontal wedges, these being the number of palms of which the several ells respectively consisted.

If these index-characters be compared with those in the body of the tablet, a slight difference, not of shape, but of aspect, will be observed in one of them.

(*a*) The 5-palm ell has a long series of occurrences in Column IV., where its appearance corresponds with that at the foot of Column II. Its use, however, is to accompany the development of the double large ell from its earliest fraction of a single palm to its maximum of nine palms, when it is merged into the third of a great reed of 1,800 sossi. This illustrative use of an ideograph seems to be a singular one in the whole of the document we are examining.

(*b*) The 4-palm ell does not appear as a 'character' in any part of the body of the tablet, though it is referred to by a series of single wedges in Column III., sub-column 6, lines 17–24. In this connection a comparison-study of Sections B and C should be found useful.

(*c*) The 3-palm ell has a fivefold appearance in Column III., sub-column 6, lines 12–16. It is not a matter of importance that the wedges composing it, while bearing the same relation to one another, are placed at a different angle. This is not unusual, and does not affect the value of the character.

(5) = *Great Reed* (*kas-bu*).[1]

Dr. Pinches' note on these two characters is as follows: 'These two characters cannot when side by side be separated, and in that case they stand for a well-known measure of length, "the long road," and, by extension, for the space of time known as a Babylonian hour (two of our hours), apparently the period needed to walk the distance indicated, i.e. about 7 miles.'

I give this note as containing the Assyriologists' current view of the interpretation of these associated characters. While not presuming to attempt to traverse these conclusions, I wish to place (beside them) the conviction forced upon me by the evidence of the Senkereh tablet as to what possibly was their earlier and more primitive meaning. It is that stands here for the instrument by which lands or roads were measured. We learn from Ezekiel (c. B.C. 600), who wrote in Babylonia, that the courts and open spaces about the temple were measured by a reed of six cubits, each of which was a palm-breadth longer than the cubits of the measuring line (Ezekiel xl. 5 and xlii. 16). May it not have been that originally this ideograph stood for the reed of measurement, and was afterwards transferred to the thing measured?

I take the ideograph to be an adjectival element

[1] Professor Sayce, who occupies the Chair of Assyriology at Oxford, writes: ' is the primitive hieroglyph , which denotes *sina*, or double. I prefer my old rendering "double-length" for *kas-bu*.'
This is in full accord with my text.

governing its associated character, and representing that the reed intended is one of five-palm ells, there being *five* wedges in its figure.

Rawlinson's transcription of the Senkereh tablet gives this ideograph as occurring on ten lines of Column IV., i.e. throughout Section C, where it is obviously in place. But he also gives it as appearing in the ten corresponding lines of Column II., where it is as obviously out of place, having been, in all likelihood, copied as to its exact form from the clearer indentation of Column IV.

The character required in Column II. is one of *three* wedges, and in Column III., where it has now been wholly effaced, one of *four* wedges.

To anyone who has examined the tablet at first hand, these suggested modifications and additions will not appear overbold, so bad in parts is its present condition.

(6) = + *or Plus* (*ammatu*).

This character occurs authentically twenty-five times on Rawlinson's transcription, and the accompanying reconstruction diagrams show that it has been effaced in many other places, in seven of which Rawlinson suggests it. It is found only in Columns I. and III. as authentic.

Over the meaning of this character earnest consultations have taken place with one or more eminent Cuneiform scholars, as it is upon the significance and value of this element that previous attempts to interpret and reconstruct the Senkereh tablet have been based.

That in much Cuneiform writing means 'cubit' has been clearly and fully proved. With this knowledge

philologists have approached the consideration of the tablet, and as a result have seen cubits in its first column, where we have found palms only. The consequence has been that Lenormant found acres and stadia within its four corners, and Lepsius stadia and parasangs. The former gives its total at 21,600 '*lines*,' and the latter 12,960,000 '*lines*.' I find but 10,800 '*lines*,' all of which are contained within the space of eighteen English feet.

This divergence is caused by my treating the document primarily from a mathematical point of view, and owing to the fact that I have no philological prepossessions. Seeing the unity and geometric accuracy of its *reverse* side, I am encouraged to find similar characteristics in its obverse. In so doing I am driven to the conclusion that whatever other meanings had, then or at other times, on the tablet it means *plus*, and *plus* only.[1]

Thus understood, becomes the principal factor in the solution of the whole mystery of the Senkereh tablet, and enables it to be read with the consistency and coherency of a proposition of Euclid.

From considerations of space I must refer my readers, for the systematized results of the whole re-reading of the tablet, to the summarized contents of Diagrams V. and VI. pp. 116, 117. Attention is also called to the hitherto unmentioned numerical summaries at the foot of Columns II. and IV.

[1] Professor Sayce allows that in later Assyrian sometimes has the meaning of *u* or 'and.' This concession is all that is necessary, as no date is claimed for the actual writing of the Senkereh tablet.

CHAPTER II.

THE RESTORATION OF THE SCALE OF GUDEA AND ITS COINCIDENCES WITH THE SENKEREH TABLET.

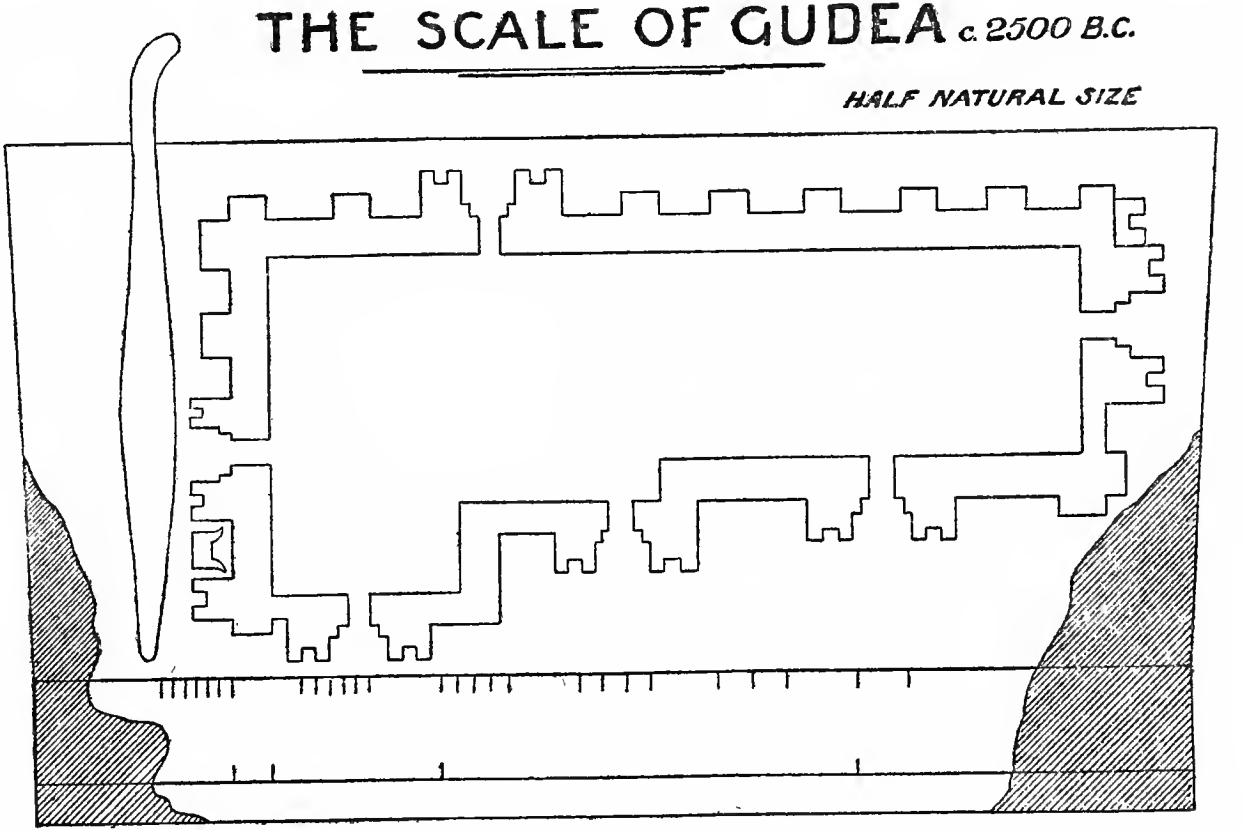
1.

HAVING gained from the Senkereh tablet the *literary* evidence as to the number of ells used in Babylonia, together with that of their relative constituent fractions, we further require some *material* evidence from the same field, and of about the same age, in order to produce a working scheme which shall claim to reproduce the length-measures of 5,000 years ago. Evidence of this nature fortunately lies within our reach, and in the interior co-ordination of these two factors will lie the proof of the theory now for the first time laid before the public in its entirety. It will be apparent that if any one measure can be substantiated as being common to the two documents before us, the size of all the other measures can be derived from it. Also, that the most useful length which could be produced would be that of the 'fundamental' palm. Its discovery in a permanently concrete form would be in itself a most striking indication that the *antique* to which it belonged

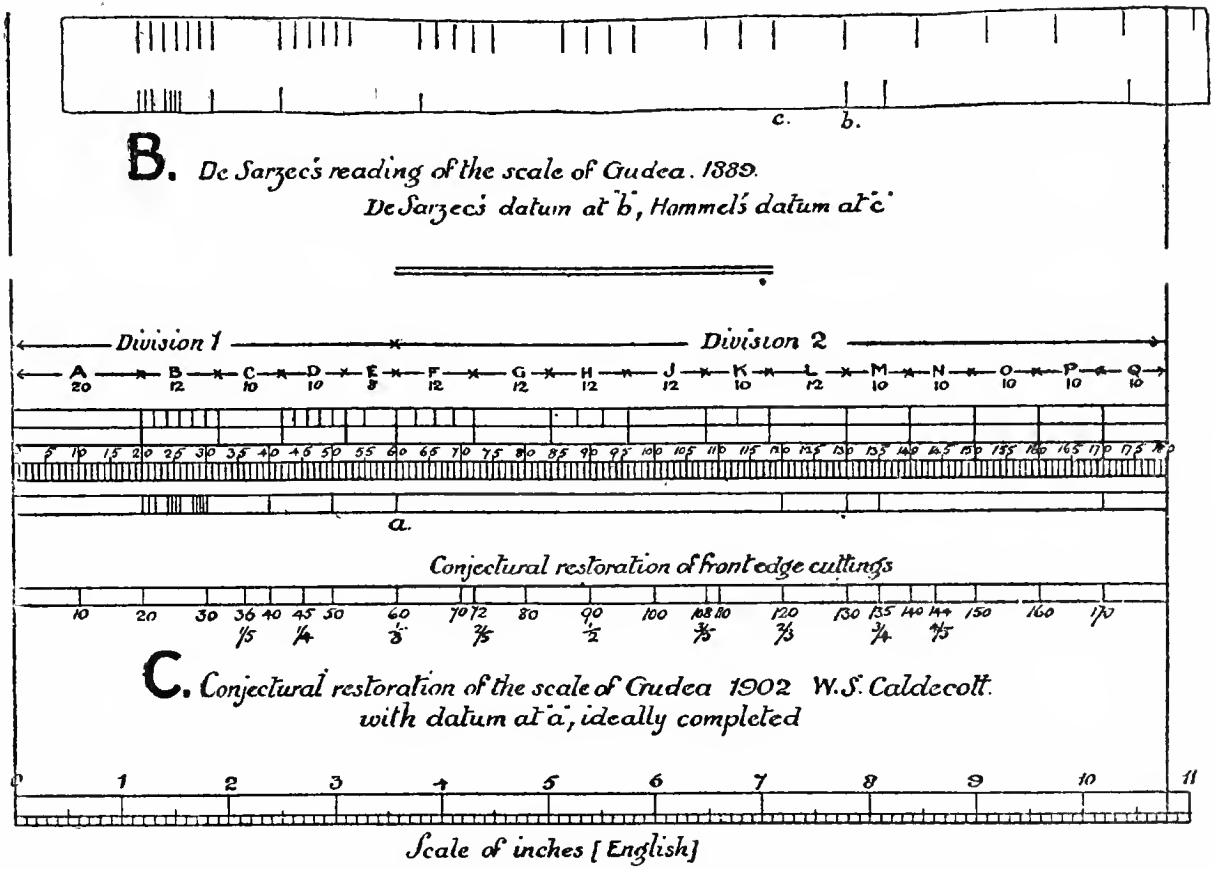
was of the same intellectual dispensation as the Senkereh tablet, in which, as we have seen, the palm takes the first place. These two discovered 'palms,' being placed side by side, should show such fractional affinities and identic subdivisions as will enable the archæologist to say: 'These may belong to one civilization and to the same system of Metrology.' Such is the nature of the case now to be laid before the public, and it is upon these lines that the evidence will move. In considering it readers will not lose sight of the fact that the new witness is a very ancient one, and that Time has not failed to show its ravages here, as it has done on the face of its fellow-witness from Senkereh.

In 1881 M. de Sarzec undertook a series of excavations for the French Government[1] in one of the *tells* of Babylonia, not far from Senkereh. This has since proved to be the site of the ancient city of Lagash or Lagas, the ruins of which are 130 miles south-east of Babylon. It is now known as the village of Telloh.

[1] 'What should a French explorer, Mr. E. de Sarzec, French consul in Basra, bring home but nine magnificent statues made of a dark, nearly black stone as hard as granite, called diorite. Unfortunately they are all headless; but, as though to make up for this mutilation, one head was found separate,—a shaved and turbanned head beautifully preserved and of remarkable workmanship, the very pattern of the turban being plain enough to be reproduced by any modern loom. . . . . The title of *patesi* (not king) adopted by Gudea points to great antiquity, and he is generally understood to have lived somewhere between 4000 and 3000 B.C. That he was not a Semite but an Accadian prince is to be concluded from the language of the inscriptions and the writing, which is of the most archaic character.'—Ragozin's *Chaldea*, 3rd edition, pp. 92, 214.



A. THE SLAB OF GUDEA, *taken from the original in Paris, showing the ground-plan of Gudea's palace at Lagash [Telloh] with scale of construction.*



B. *De Sarzec's reading of the scale of Gudea. 1889.*
De Sarzec's datum at "b", Hammel's datum at "c"

C. *Conjectural restoration of the scale of Gudea 1902 W.S. Caldecott.*
with datum at "a", ideally completed

Buried in the courtyard of an archaic palace at Telloh, M. de Sarzec found eight headless statues of diorite. These are now in the Louvre Museum, a cast of one having been presented to the Trustees of the British Museum (No. 91,025). Its notice-card bears the date of B.C. 2500.

This piece of engraved statuary represents King Gudea as a worshipper, in the act of dedicating his palace to the care of some deity. His hands are folded in the attitude of prayer, and on his knees lies a slab of stone. On this slab there is engraved the ground-plan of a building which was evidently of earlier erection than that of the palace, the walls and courtyard of which still exist. Both these palaces stood upon the same site, and have a general likeness of plan to one another. On the slab, besides the ground-plan, are engraved two other details. One of these is a graving tool, which has no message for us, apart from the fact that it is similar in every respect to tools in use to-day.

The other is a record of the measure, or one of the measures, by which the palace was built. It is this feature of the slab which is now to claim our attention. The rule—known as the rule of Gudea—is in the form of a double line cut near the outer edge of the slab. In it are a number of indentations or cuts, which give to the rule its unique value and importance. It is to the great loss of ourselves that parts of this rule are missing, the two corners of the slab, i.e. those farthest away from the king's body, having been broken off and lost.

Many attempts have been made to restore, by conjecture, these broken-off portions, and thus to complete the rule,

but none of these has met with general acceptance. The first was made by the discoverer, who gives to the slab a total length of 29 centimetres, and to the graduated scale, as restored by him, a length of 27 centimetres[1] = 10·6301133 British inches. Professor Hommel gives to the rule an original length of 249 millimetres,[2] or 9·80332671 inches. Professor Paul Haupt says, 'The graduated portion of the rule of Gudea, on statue B, is $10\frac{1}{2}$ inches, while the entire length of the rule is $10\frac{3}{4}$ inches.'[3]

These varying lengths would seem to have been arrived at by reading the cuttings of the rule from the left-hand side of the figure. Also, I have not seen it remarked that the slab itself is not rectangular.

An original measure of the slab at the edge nearest to the king's body gives $11\frac{1}{5}$ inches as the length. If the existing lines on either side be produced, they will show a contraction of two-fifths of an inch in the length of the slab. It is at this point that the first, or inner, line of the rule is met.

The rule itself is to be credited with corners which were right angles. We thus arrive at the conclusion that the rule was $10\frac{4}{5}$ inches in length. This is the measure which Dr. Oppert gives as the result of the measurement of the walls of Khorsabad. His words are, 'The Assyrian span is therefore exactly $10\frac{4}{5}$ inches.' See *Records of the Past*, new series, vol. xi, for 1878, pp. 22–23.

[1] *Découvertes in Chaldée*, by E. de Sarzec, 1884–1889, plate 15.

[2] *Article* Babylonia, Hastings' Dictionary of Bible, vol. i. p. 218.

[3] Ezekiel vol. of the Polychrome Bible, p. 180, note. The rule of Gudea on statue E is here said to be a line measure and not an end measure.

2.

Having, with Oppert's support, arrived at the first result in the length of 10·8 inches, we have further to see what were the interior divisions of this space, as denoted by the cuttings which still remain on it, many others having doubtless been effaced.

It is at this point that I part company with my predecessors in the attempt to solve these difficulties. The length I give to the rule differs but slightly from that of the French *savant* who first gave attention to it. But in the matter of its interior economy *I begin at the other end.* The data of De Sarzec and Hommel are shown at *b* and *c* on the accompanying drawing. Mine may be seen at *a*, where, as at *b*, are opposite cuts in the rule (p. 143, B).

It is these opposite cuts that, by the plan herein adopted for determining the original length of the rule, mark its 'third,' there being to their left twice the distance that there is to their right. If, however, the same distance of 3·6 inches be measured from the other end of the rule, it will be seen that there are no double cuts at the 120th soss, thus showing that the rule did not consist of three equal spaces, but of two divisions, of which one was double the length of the other. This fact will have an important bearing upon its analysis and reconstruction, now to be entered upon.

(*a*) The smallest measure of the Senkereh tablet is the '*line*,' three of which went to each soss. The same relation is given in the Gudea Scale, though the process of development naturally differs. In this case the

exposition begins on the front edge of the rule, and at its right side.

Here we find the remains of seven cuts, which once stood opposite the same number on the inner side, these latter still existing. In each case these seven cuts on either side enclosed six spaces, each of the width of two sossi. The six spaces on the inner side were (as now) clear and distinct. Those on the outer side, now partly defaced, were the scene of the demonstration. This was effected by leaving every other space vacant, and by dividing the three intermediate spaces into 2, 3, and 6[1] divisions. These were the consecutive fractions of 2—soss spaces—showing the widths of 1 soss and $\frac{2}{3}$ and $\frac{1}{3}$ soss. Few traces of these minute subdivisions, though engraven in the rock, could be expected to withstand the disintegrations of millenniums of years. But enough remains to show how the system was developed—the 'system' being that familiar to us in the columns of the Senkereh tablet, as we shall see.

3.

It has already been shown that the first column of the Senkereh tablet is devoted to an explication of the palm in its various fractions and larger relations. It has been already suggested that the 'third' of the Scale of Gudea, marked as division I, is an embodiment of the same fundamental measure. There should then be discoverable

[1] Four only are shown on the drawing, owing to their nearness to one another.

in *this* the same, or some of the same, fractions as we have found in *that*. Nor is this expectation disappointed.

(*b*) The first division of the palm was into digits, of which three went to its width.[1] It is one of the vexations of the case that the space given to the digit on the slab of Gudea has been torn away by one-half its length. It was contained in the right-hand corner of the rule, there being nothing else with which to fill up the space between the enclosing line and the first cut. This space, 'A,' is exactly that of 20 sossi, and may justly be taken as having been meant to show the length of the digit.

(*c*) Next to the width of the digit on the scale come three spaces marked B, C, and D. Of these C forms a blank between the other two—a device we have already seen used in the case of the '*line*.' B and D are composed of double-sossi, the one containing *six* and the other *five* such parts, their values being respectively one-fifth and one-sixth of a palm. These two spaces of ten and twelve sossi show that the system of the slab, like that of the tablet, is both decimal and duodecimal. This will be seen to be a point of cardinal importance, as establishing the relationship of the two witnesses; the variation in the mode of exhibition (one showing 5's and 6's, and the other 10's and 12's) being an additional point in their favour, as being the work of two men, essentially the same in system and yet differing in the mode of presentation.

[1] On the authority of Herodotus (I. 178), who says that the difference between the 'royal' and another Babylonian cubit was three digits.

4.

Having shown some points of harmony between the 'palm' of the tablet, in its first column, and that of the Gudean scale in its first division, it is now advisable to see if similar coincidences do, or do not, exhibit themselves in the remaining portions of these two independent witnesses.

In making these investigations, it is of importance to remember that the Scale of Gudea does not consist of three separate and clearly defined palm-lengths. As there is no double cutting opposite to the 120th soss, it is evident that division I. was of the length of a single palm and division II. of the length of two palms.

Looking at De Sarzec's reproduction of the cuttings found in the maimed rule (none of which are disputed in my transcript), it is not difficult to see what was its plan of construction. In order to do this, the cuttings on its inner line must now be read from *left to right*, i.e. from the left of the royal figure.

These cuts, when not single, show that with intermediate blank spaces, as elsewhere, there were five detailed spaces given, containing respectively 2, 3, 4, 5, and 6 interior divisions.[1] The conjectural restoration of the scale, adhering to these distances in detail C, shows that their contents were as follows:—

[1] These several distances being plainly marked on the original rule, it will be found to be not impossible to subject them to a personal scrutiny, and thus to arrive at the length of the *sossus*. The evidence to be derived from this source is a strong proof of the correctness of the whole, as this test will not stand had there been either more or fewer than 180 sossi in 10·8 inches. The differences between these spaces is that of a single sossus between one and another.

(1)	Subdivision	K, 2	spaces of	5	sossi each.
(2)	„	H, 3	„	4	„
(3)	„	F, 4	„	3	„
(4)	„	D, 5	„	2	„
	„	B, 6	„	2	„

The last of these, B, has already been dealt with on a previous page, in illustration of the sossus and the '*line*.' This removes it from the necessity of further remark here, as, beyond the fact that it is in the progression 2–6 spaces, above stated, it does not belong to the series of exhibits now engaging our attention. Its contents of two-soss spaces is in favour of this separation, as these spaces had already been delimited in subdivision D.

Taking the four subdivisions D–K, together with the minutiæ of B as previously explained, it will be seen that they cover the whole ground of the units of measurement, as well as of their fractions of $\frac{1}{3}$ and $\frac{2}{3}$. With this scale before him, any workman of ordinary intelligence could derive from it instruction as to any of the 30 lengths which are contained within the width of 10 sossi, equal to $\frac{3}{5}$ of an inch. It is probable that these fine gradations of measurement were necessary for the engraving of precious stones and of seals, of which we know that large numbers were used in Babylonia, the British Museum alone having a collection of many hundreds from there.

A comparison of details of the major A, B, and C, on the accompanying plan, will show that to the left of his

datum at *b*, M. de Sarzec could not have found more than two or three of the five spaces recorded in his full-length rule, inasmuch as the slab is here broken away. I am, however, inclined to think that his suggestion of five equal spaces to the left of *b* is correct, and have marked that number in my conjectural restoration. To these spaces I give a uniform width of 10 sossi, and find them separated, by subdivision L, from the sixth tenth, which, on the right, is repeatedly cut up into units, as we have seen. This separation-device is everywhere apparent in the rule, and was necessary to prevent overcrowding and obscurity.

That there should be five complete decades of sossi, and that a sixth decade should be divided into its elemental units, is in harmony with the Babylonian system of notation. The statement of Berosus already quoted, that the Babylonians made use of a decimal notation, is not to be understood in the sense of their having used hundreds and thousands; but, rather, that the sexagesimal system was commonly divided into 6 decades of 10 each. To this the whole reading of the *scheme* of the Senkereh tablet bears witness. On its reverse face are about 100 examples in which totals are worked out, the highest result being 27,000. All these are given in sixties, or in sixties-of-sixties. In another tablet, a portion of which is transcribed on the same plate as Rawlinson's reading of the Senkereh tablet, 3,600 is indicated by a single upright wedge[1]—being 60 × 60. So immutable was the system of sixties!

[1] As is also done in the character immediately preceding the colophon of the Senkereh tablet.

It is, therefore requisite that the systems, both of the *obverse* of the tablet and that of the Gudean scale, should not transgress this cardinal rule in crucial cases, either by overstepping it in larger numbers or by falling short of it in lesser numbers. Nor do they. Each conforms to it, and the fact that the second division of the Gudean scale exhibits five decades in full, and a sixth decade in units, shows how completely it fulfils this primary condition of acceptance.

5.

Upon the general agreement of the Gudea Scale with the Senkereh tablet the whole case for the Metrology of ancient Babylonia here rests. If, however, we compare the 3-palm length of the Gudea Scale with the 3-palm ell of the tablet, as to their respective fractions, an accidental illegibility of the tablet in this portion of its obverse will deprive our conclusions of much of their force. Two of the original characters alone remain (Column II., lines 6–7), each of which requires some addition to its value to fit it into the system. The first twelve lines of the column, however, are a silent witness to the fact that they once bore as many fractions of the single palm, and that these twelve relative constituents of the palm were also those of the Short Ell, the *nexus* between the two being the unexpressed multiplier 3.

A hitherto little noticed peculiarity of Column II. is the fact that it contained a twofold set of measures. In Sections A and B 4 palms are worked out—partly in

smaller palm-fractions and partly in digits—to a length of four small ells. The nine digits alone remain as evidences of this operation—but they are enough. In Section C, which is in much more perfect condition, a fresh set of measures is evolved. Here 8 palms are worked out into two small reeds—3 being throughout the multiplier of this column.

In this unusual way two uniformities are maintained. One is that the first sub-column in each of Columns II., III., and IV. shall consist of 12 palms. The other, that the total exhibited in the sixth sub-column of each of the columns shall be 2 reeds. It follows that the reeds of Column II. consisted of 4 ells, and those of Columns III. and IV. of 6 ells each. So radical a dislocation of the system could only have been caused by some sufficient reason, and have been redeemed by some well-known application of these earlier measures. My own suggestion is that A and B were goldsmith's or jeweller's measures, a suggestion which is supported by evidence that lies outside the scope of this chapter.

This supposed exceptional use of the short ell is limited to the upper portion of the column. The third section, C, takes its place as giving the fractions of the double small reed, which may have had another use. It will be remembered that a reference has already been given to the fact that the walls of Khorsabad were measured in 'spans,' the length of each being that of a small ell (= 10·8 inches).

Though $\frac{9}{10}$ of a foot happens to be the actual length of the Gudean scale, we are not at liberty to limit its

use to this length. Its design, as composed of a single and a double palm-length—each clearly separated from the other,—would enable any workman to derive from it the length of an ell of 4 palms ($= \frac{12}{10}$ foot) and one of 5 palms ($= \frac{15}{10}$ foot). It was not necessary to elaborate these in the small space at the disposal of the sculptor, nor was it possible.

The 'palm' being fundamental in both records before us, the following Table will show its fractions as drawn from the rule of Gudea.

No.		Relation to Palm.	Value in inches.
(1)	1 *line* = $\frac{1}{3}$ of sossus	$\frac{1}{180}$	$\frac{1}{50}$
(2)	2 *lines* = $\frac{2}{3}$ „	$\frac{1}{90}$	$\frac{2}{50}$
(3)	3 *lines* = 1 sossus	$\frac{1}{60}$	$\frac{3}{50}$
(4)	2 sossi	$\frac{1}{30}$	$\frac{6}{50}$
(5)	3 „	$\frac{1}{20}$	$\frac{9}{50}$
(6)	4 „	$\frac{1}{15}$	$\frac{12}{50}$
(7)	5 „	$\frac{1}{12}$	$\frac{15}{50}$
(8)	6 „	$\frac{1}{10}$	$\frac{18}{50}$
(9)	10 „	$\frac{1}{6}$	$\frac{30}{50}$
(10)	12 „	$\frac{1}{5}$	$\frac{36}{50}$
(11)	20 „	$\frac{1}{3}$	$1\frac{1}{5}$
(12)	60 „	1	$3\frac{3}{5}$

All these fractions, together with many others of larger measures, occur on the obverse face of the Senkereh tablet. It is in this coincidence, so often repeated, that we find the correspondence of the Gudean scale and the Senkereh tablet with the early metric system of Western Asia, which hitherto has been unknown.

This conclusion may prove to be a key which will fit the wards of many locks, and may give entrance to new fields of investigation, for "science is measurement."

Taking the human hand as having an average, and agreed-upon, width of one-tenth of a yard or three-tenths of an English foot, we have in the sixth diagram of the series (p. 117) a complete metrological system which begins at one-fiftieth of an inch and admits of indefinite extension and application. As the experiment of *inductive* metrology has hitherto failed to lead to one definite standard of measurement for Accadian and Semitic antiquity, the subject of *comparative* metrology may possibly find in this study a solution of some hitherto unexplained variations.

SUMMARY OF BABYLONIAN LENGTH-MEASURES.

I. *As derived from the Senkereh Tablet and the Gudean Scale.*

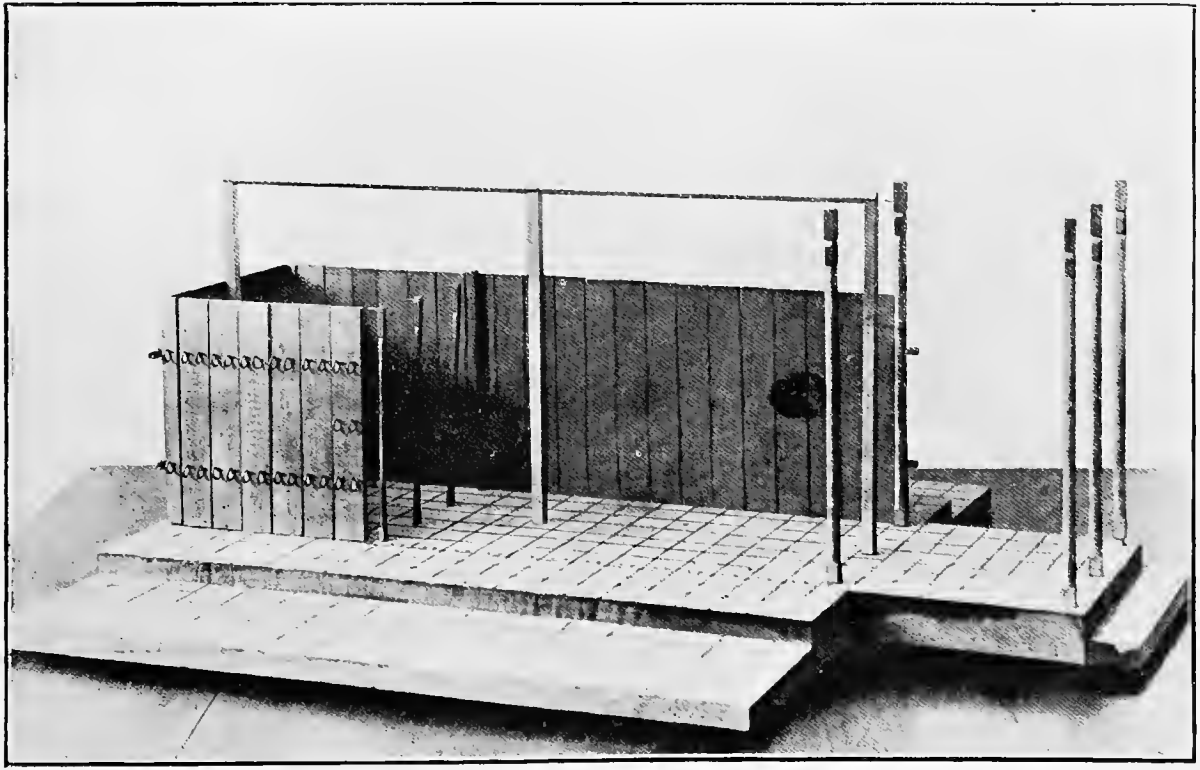
(For fractions of the palm, see *ante*.)

	ft.	ins.
Palm		3·6
Small Ell, or Span		10·8
Medium Ell		14·4
Large Ell		18·0
Small Reed (4 Small Ells)	3	7·2
Medium Reed (6 Medium Ells)	7	2·4
Large Reed (6 Large Ells)	9	0
Double Small Reed	7	2·4
Double Medium Reed	14	4·8
Double Large Reed	18	0

II. *As derived from the Khorsabad Tablet.*[1]

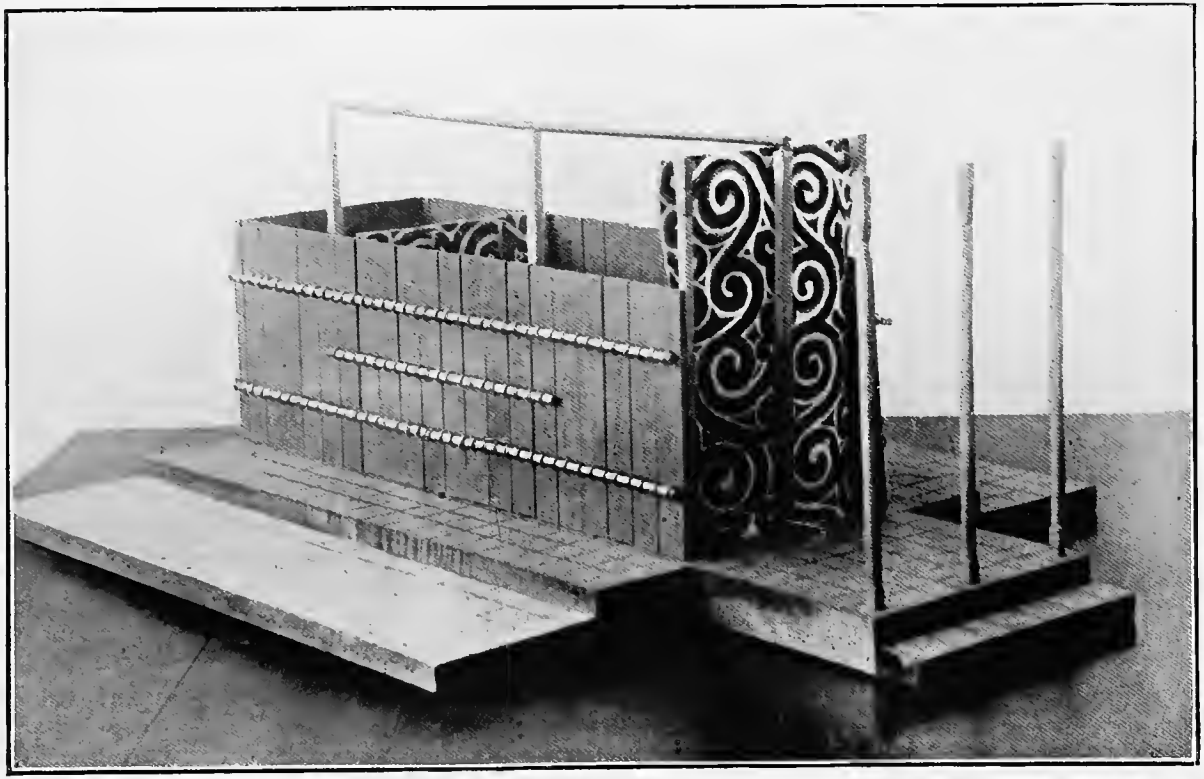
	yds.	ft.	ins.
Span, or Small Ell			10·8
Half-fathom (= 6 Spans)		5	4·8
Fathom (= 12 Spans)		10	9·6
Stade (= 60 Fathoms)	216	0	0
Ner (= 10 Stades)	2160	0	0

[1] The translated inscription of this tablet is given on pp. 221, 222.



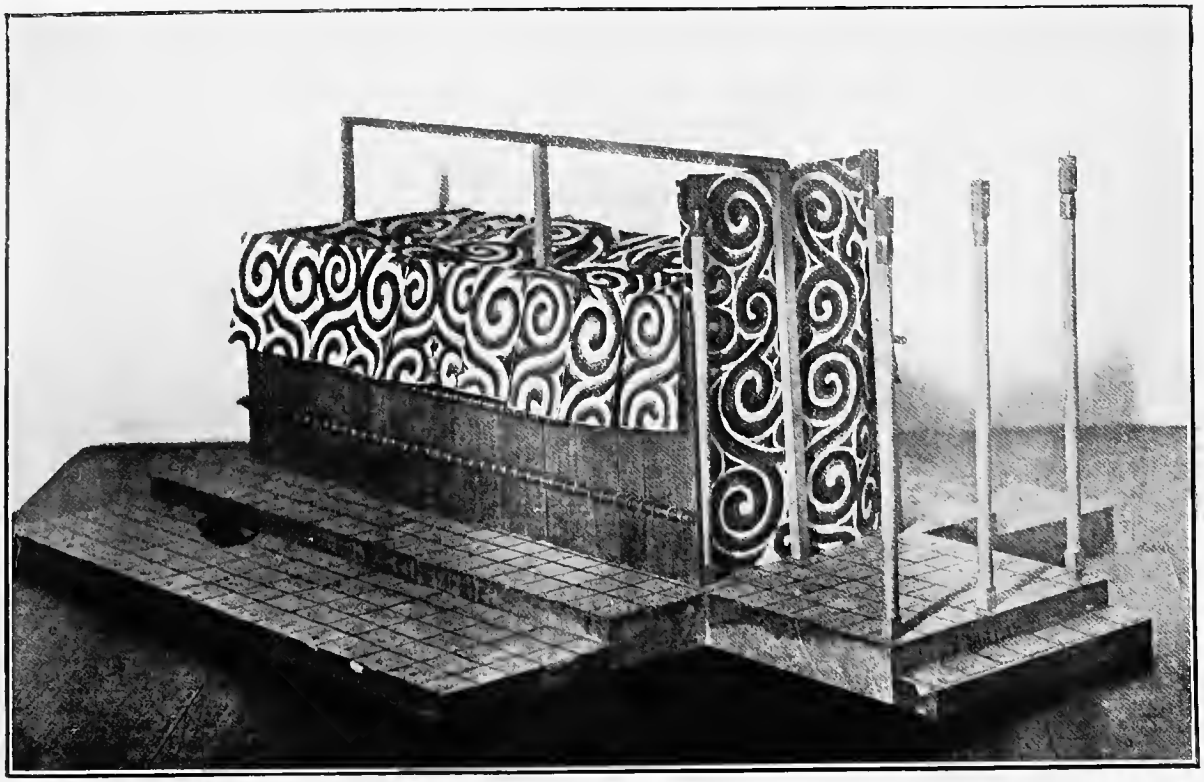
THE ERECTION OF THE TABERNACLE—FIRST STAGE.

(*Refer also to plate facing page* 48.)



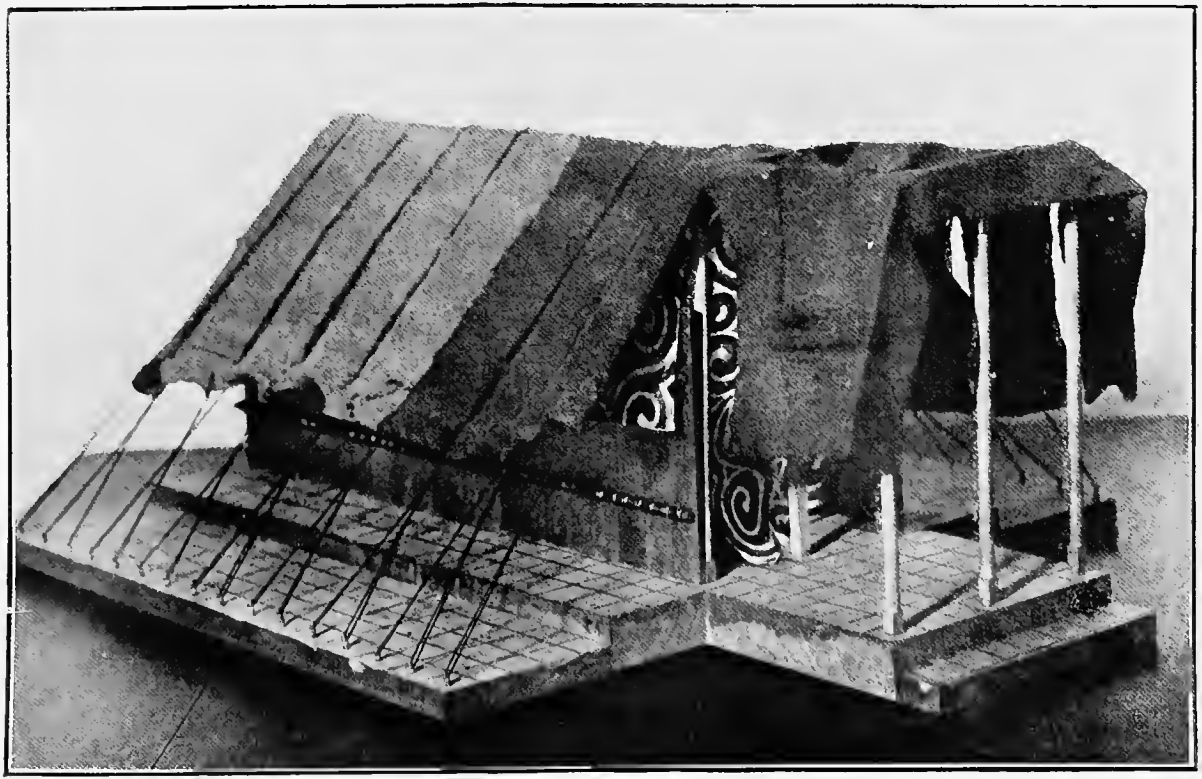
THE ERECTION OF THE TABERNACLE—SECOND STAGE.

(*Refer also to plate facing page* 64.)



THE ERECTION OF THE TABERNACLE—THIRD STAGE.

(*Refer also to plate facing page* 80.)



THE ERECTION OF THE TABERNACLE—FOURTH STAGE.

PART III.

THE TRIPLE CUBIT OF BABYLONIA

AS USED IN THE

CONSTRUCTION OF THE TABERNACLE.

CHAPTER I.

THE ADJUNCTS AND ACCESSORIES OF THE TABERNACLE.

A MOMENT'S consideration of the subject will make it obvious that before the drawing of any plan or map from a given specification it is necessary to decide upon a scale of measurement to which such drawing shall conform.

If a single length-measure shall have been employed in the paraphrase of any specification, it will not greatly matter what the adopted scale is. The final result will present the same appearance, whether to a 'foot' be given a length of ten or twelve or fourteen inches. But there will always remain the underlying disadvantage of its not being known what was the actual size of the building specified. In a plan so produced the relation of its parts one to another may be correct, but it will be impossible to say what relation in size the whole would have to any existing building.

This is the condition in which the opening of the twentieth century finds the question of the sacred buildings of the Jews. All the given measurements and descriptions of buildings in Scripture are stated

in 'cubits,' and the length of the cubit has not been determined. One well-known metrologist gives it as sixteen inches; another, equally well known, as eighteen inches; while a third, of still higher reputation, gives his verdict in favour of twenty inches.

Not only, therefore, is there uncertainty as to the actual size of the Tabernacle and the Temples, but the plans and models of these erections have been uniformly and necessarily inconsistent within themselves. It has been found impossible to carry out the specifications as they are written. The difficulties encountered in working out and harmonizing the details have been found to be insurmountable, and various compromises have been adopted. These have been adopted, not from any want of scholarship or of patient skill in the treatment, but from the fact that one of the main features of the case has hitherto been unknown and left out of view.

The reason for these repeated failures will presently appear in the thesis that no single cubit-length could possibly succeed in reproducing a structural idea, when three such lengths were employed in its inception and description. Till this fact has been discovered and acted upon, all attempts at the reconstruction, on paper or in models, of the buildings of the Bible are of necessity foredoomed to error and failure.

It is in this condition of haziness that the absorbing topic of Jehovah's House through thirteen centuries lies; when a discovery has been made which is calculated to revolutionize the conception of both savant and saint, of Jew and Christian.

That discovery is that, about a thousand years before the birth of Abraham, there were in common and every-day use in Mesopotamia three 'ells' or cubit-lengths, each of which was applied in a specific and separate department of trade and human interest.

The details and proofs of this discovery were communicated to the members of the Royal Asiatic Society in December, 1902,[1] and are published, with corrections, as Part II of this volume.

The conclusions arrived at had previously been announced in the *Quarterly Statement* of the Palestine Exploration Society for January, 1902, in the words: 'There were three cubits of the respective lengths of $\frac{9}{10}$, $\frac{12}{10}$, and $\frac{15}{10}$ of an English foot, the first of which was used exclusively for gold and gold-tapestry work, the second for building purposes, and the third for measuring areas only.'[2]

Forged upon the anvil of cuneiform research, this key will be found to fit the wards of every lock which has

[1] Journal of the Royal Asiatic Society, April, 1903, pp. 257-283. ART. VIII.—*The Linear Measures of Babylonia about* B.C. 2500.

[2] Mr. S. Wiseman, of the English Mission Hospital in Jerusalem, whose life has been spent in Palestine, tells me, under date 29th February, 1904, that about fifty years ago there were actually three different cubits or 'dira' (arm) in ordinary use in Palestine. They were—

(1) The *diraā baladi* (= the common Egyptian cubit), which was used for measuring linen, etc., manufactured in Egypt, and is equal to $22\frac{2}{3}$ inches.

(2) The *diraā Istambouli*, or cubit of Constantinople, which was used for measuring European cloth, etc., and is about $26\frac{1}{2}$ inches.

(3) The land *diraā*, used in connection with land measurement, is equal to 30 inches.

The difference between these lengths is approximately one of 3·6 inches.

hitherto barred the way to clearer light, and as we proceed in these studies it will be found to open the door of almost every architectural Bible difficulty, from the days of Moses to those of Josephus.

2. The suggestion has already been made public that when Abraham left the land of Mesopotamia he may have taken with him the standard length-measures of his country.

This suggestion assumes an air of strong probability when we find, as we shall do, that on leaving Egypt, and without any reference to the land of their fathers, the Hebrews in the wilderness used the Babylonian measures for the erection of the Tabernacle.

The 'pattern' was showed to Moses in the Mount, and the record of that revelation, as contained in the book of Exodus, makes no reference to a diversity in the length of the cubit. These differences in the meaning of the word 'cubit' were treated as matters of common and every-day knowledge. It is as if in our own day public tenders were called for certain artistic metal-work, in which so many ounces of gold and silver and so many ounces of brass and lead were to be used. Neither of the parties to such a transaction would require to be told, or be expected to record, that the 'ounce' of the former was to be one of 480 grains and the 'ounce' of the latter of 437½ grains. Such a distinction would be a matter of ordinary knowledge to each party, and the fact itself would, by common custom, be placed beyond the possibility of dispute.

This hypothetical illustration may enable us to understand how, in the instructions given to Moses for the creation of a new Tabernacle, there was no reference made to the various lengths of the cubit. None such was given as to the length of the single cubit, supposing but one to have been used; and none such was given as to the length of any other cubit, or cubits, that may have been requisite to the carrying out of the work.

The books of the Bible are each of them severely compressed, and facts obvious to us, or to those to whom they were at the first given, are seldom stated. We thus have an experimental right to assume that the early metric system of Western Asia, hitherto unknown to us, was perfectly familiar to Moses and in common use amongst the early Hebrew people.

These measures, from their use in the construction of the Tabernacle, soon assumed a sacred character, and, as we proceed adown the stream of time, and pause from time to time to survey the erection of this Temple or of that, we shall find that they remained unchanged during the thirteen centuries of Hebrew national life.

3. Having laid the foundation of our subject in a far-off antiquity, the evidence on its behalf going back to a period of from twenty-five to thirty centuries before Christ, we may now proceed to build upon it those divinely-ordered erections around which the heart of Judaism, Moslemism, and Christianity have entwined the most tender and sacred associations.

Of these erections, the first in order of time is the Tabernacle in the wilderness, the date of which is, approximately, 1280 B.C.[1]

In the endeavour to architecturally restore the details of this earliest of all the Houses of God, we shall be faithful to all the conditions laid upon us by the testimony of the Senkereh Tablet and the Gudean Scale — witnesses themselves dating from a period as long antecedent to the Tabernacle as that was to the Christian Era. It is not to be supposed that in the infancy of history and in the morning-lands of the Bible men were careless or inexact in what concerned their religious faith. All the evidence of the inscriptions goes to show that the religious faculty of the men then living played a more important part in the business of life than it does amongst ourselves. Least of all can this be supposed of the stock of Abraham. Their conservatism of what had already been was intense. A minute and particular ritual governed the lives of the best men of the nation. The House of Jehovah, whether Tabernacle or Temple, was the centre of the nation's thought and feeling, and any development or reconstruction *there* was a matter of the most reverent and punctilious consideration. Believing the pattern showed to Moses in the Mount, and the description handed by David to Solomon, to have been God-given

[1] Matters of chronology and of the date of the composition of portions of the Old Testament Scriptures lie beyond the range of these pages, though the very practical nature of these material reconstructions has an important bearing on the historical character of the whole narrative. But see p. 101.

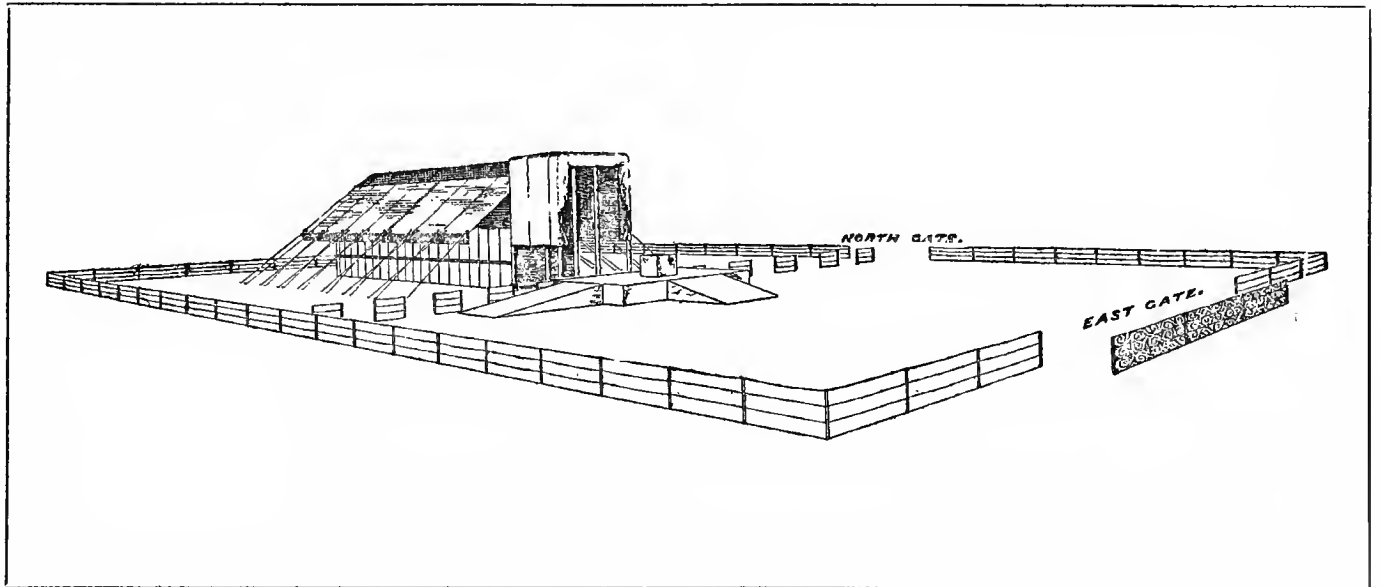
and revealed, the priests did not dare to alter or amend either of them in any particular in which escape was possible. It is in the force of this sentiment of tradition that we now find our strongest ally in the endeavour to trace the evolution of the Herodian Temple from its prototype of the Tabernacle.

SCALE

USED IN THE ACCOMPANYING DRAWING OF THE TABERNACLE

(*With details*).

1. Cubit used in the plotting of the Tabernacle Court, 1 ft. 6 ins.
2. Cubit used in the erection of the Tabernacle and Tent, 1½ feet.
3. Cubit used in the making of the gold-embroidered Veil and the ten Curtains, 10·8 inches.



THE TABERNACLE OF WITNESS AND COURT OF THE TABERNACLE.

1. The Court of the Tabernacle.

The books attributed to Moses uniformly speak, in the singular number, of 'the court' in which the Tabernacle stood. This form of phraseology is, of course, perfectly correct, as the idea of the unity and equal sanctity of the whole enclosed area was thus kept prominently before the mind. As a matter of fact, however, the enclosure followed the precedent of Egyptian temples, in which there were two square areas, the temple itself being situated in the rearmost of the two.

In the delimitation of the Tabernacle courts or squares, they were placed as lying to the east and west of one another; and each of the areas measured fifty cubits on each of its four sides. It is apparent that a cubit of 18 inches, as the measure of distance, applied to the text of Exodus xxvii. 9–18, will give us an enclosed space of 75 feet in width, by 150 feet in length.

In this postulate we have the first positive result of the recovery of the surveyor's cubit. Here is a conclusion which brings into view, from the uncertainties of speculation, the first concrete result of a well-ascertained fact of metrological lore. The importance of this deliverance from the 'might-have-been' will grow upon us as we proceed, and it will culminate in the demonstration of its correctness when we come to deal with the area upon which stood the Temple of Herod. Till then I must ask my readers to hold their final judgment in suspense, and to allow the evidence on its behalf to gather as we go on.

Now, we may regard this application of a Babylonian length-measure to a problem of Hebrew architecture as being on its trial. *Then* it will be seen that it was not empirical. To this Q.E.D. a study of the whole series of these maps and plans[1] is the necessary preliminary.

A uniform width of fifty large cubits, with a common length of one hundred such cubits given to the court of the Tabernacle, is easy to remember as so many half-yards. A square of 25 yards was thus the size of each of the two rectangles in which, for nearly three centuries, the worship of Jehovah was solemnized.

Are any traces of such an area still to be found? There is still visible at *Seilûn*, the ancient Shiloh, a level platform, which, in places, has been cut into the rock to the depth of 5 feet. The width of this platform, lying on the gentle rise which leads to the village, is 77 feet, as compared with the 75 feet required by the scale. This coincidence is remarkable in itself, and it is not weakened by the fact that the platform itself is 412 feet in length, as against the requirement of 150 feet. For the added length of about 250 feet I must refer my readers to the section of this chapter on the East Gate (pp. 175–8), in which it will be seen that such an additional space was required.

Jeremiah sent the men of his day to Shiloh to see what God did to it for the wickedness of Israel (vii. 12). To the same desolate spot we may appeal for a portion of the

[1] The author has in preparation volumes similar to this, dealing with (*a*) Solomon's Temple; (*b*) Ezekiel's Temple; (*c*) Herod's Temple; in all of which the same set of measures will be used, with the same local applications.

evidence as to the size of the Tabernacle and its courts. Such evidence will be still more complete when we know the bearings of the platform longitudinally. It should lie, as nearly as the science of that day allowed, in the direction of east to west.[1] Some future traveller will, it is hoped, enlighten us as to this point, and also as to whether the slope of the ground on the upper side affords any indication of an approach to the North Gate.

2. The Enclosure and Hangings of the Tabernacle Court.

Having levelled a space of ground 150 feet long by 75 feet wide, the next care of the Jewish priests would be to enclose it, in accordance with the directions given to Moses. These may be seen in the Book of Exodus, where we have in chapters xxvi. and xxvii. the incipient account or specification, and in chapters xxxvi. to xl. the history of the erection. No further reference will be made to these chapters in these pages, every reader having them at hand, and being supposed to be, or to become, familiar with a subject contained in so narrow a literary space. No liberties will be taken with the text in this little book.

Anyone who will take a sheet of paper and pencil and will sketch out the places of the sixty pillars on which the curtaining was hung[2]—twenty on each north and south side, and ten on each west and east—will find

[1] See Introduction, p. xiii.

[2] In doing this, the direction of Exodus xxvii. 14–15 should be borne in mind, that there were three lengths of curtaining on either side of the East Gate opening. These would require the support of *four* pillars on each side, the corner pillars being counted to the sides.

himself confronted with this difficulty, that twenty pillars on each of its larger sides will give but nineteen spaces instead of the twenty requisite, the pillars being placed at distances of five large cubits apart, reckoning from centre to centre. Not only must the cubits here used have corresponded in size with those of the area, but there must have been some special arrangement made by which, while the spirit of the instruction was obeyed, the letter of its numbers should not be broken.

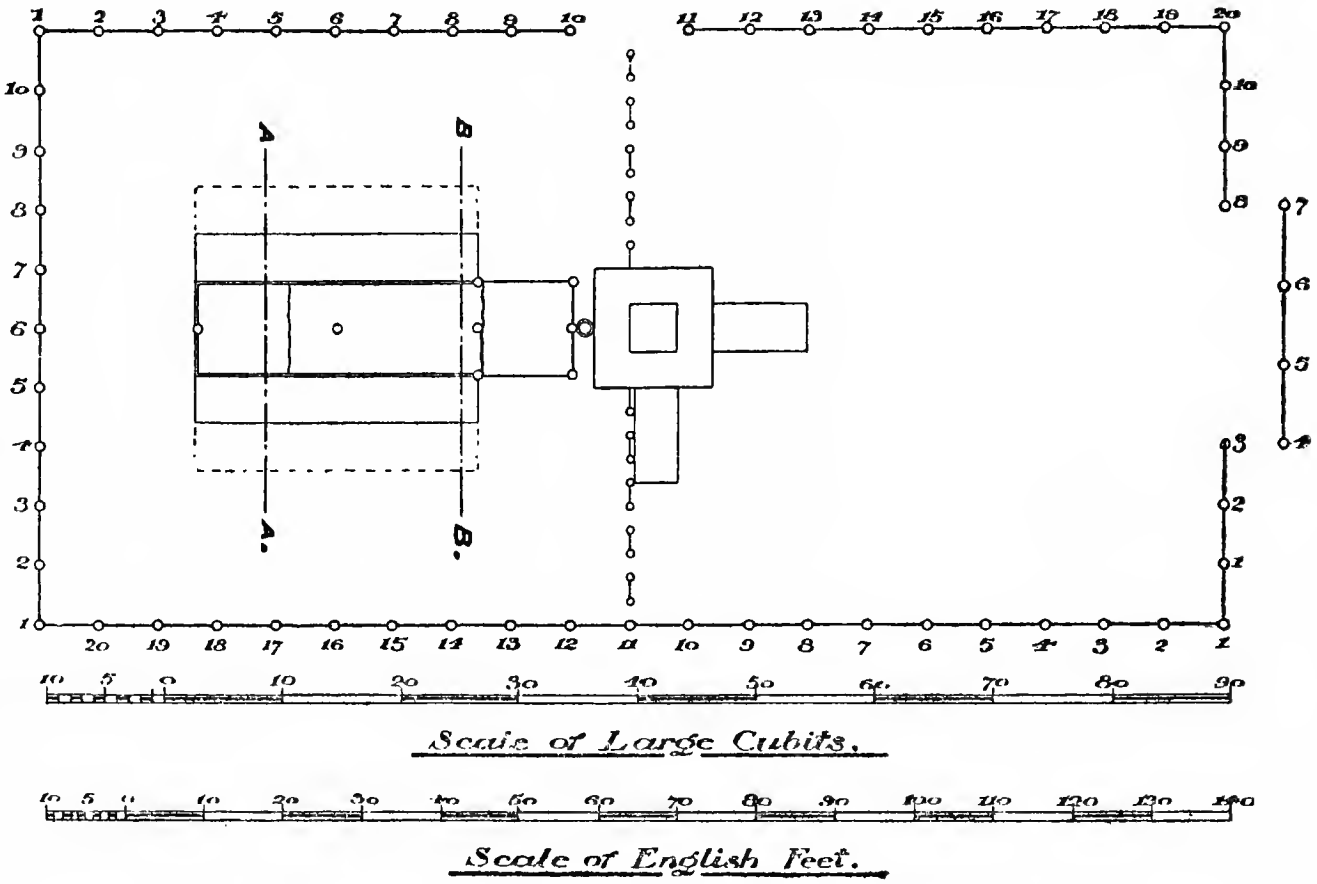
The solution of this difficulty may be seen in the detail drawing, opposite, of the Tabernacle court, where the pillars are numbered to facilitate reference.

Several results follow from the adopted method by which this drawing is brought into harmony with the text. Each of these is thought to be of sufficient importance to merit separate mention, inasmuch as we are dealing with a portable erection, the details of which had a dominating effect upon subsequent structures, which were not portable, though evolved from this, and designed to serve the same specific purpose.

Any feature of the Tabernacle, however seemingly unimportant, may have been developed and enlarged in subsequent Temples, and, unless we can trace its germ in the Tabernacle, will remain unaccounted for, and its significance be undiscovered. It is for this reason that the reader's thoughtful attention is asked to the two or three sections that follow.

The North Gate.

An examination of the adjoining plan will show that,



Outline Plan of the Outer Court and Tabernacle.

as there arranged, the sixty pillars around the court left a vacancy of one in the circuit. This is not directly referred to in the text of Exodus. The mathematics of the case, specially the placing of the pillars of the East Gate outside the alignment of the court, demand that at one point in the perimeter there should be a hiatus of 15 feet in the curtaining, caused by the inability to use a sixty-first pillar. The place of this hiatus has been given as between the tenth and eleventh pillars on the north side of the altar, in obedience to the direction of Leviticus i. 11, that sacrifices were to be slain 'on the side of the altar northward.'[1]

This was, therefore, the side which would be most convenient for the admission of animals to the court itself. The worshippers, other than sacrificers, entered the court at the east gate. Those who brought living animals entered, with them, through the north gate, and each sacrificer standing beside his offering, there slew it before the Lord, and then took his place beside the altar amid the other worshippers. That this remained the highest act of temple worship till the days of Christ, we know from His words in the Sermon on the Mount

[1] This definition of place would seem to have been thus vague *with intention*, as it permitted of the sacrifices being offered either within or without the enclosure of the Tabernacle. In the vision of Ezekiel's Temple the larger sacrifices were to be killed without the wall, and the smaller, as lambs and goats, within the gate (Ezekiel xl. 39, 40). This was in harmony with the law of Leviticus iii., which states that offerings of the herd (i.e. cattle) were to be killed at the door of the tent of meeting (verse 2), and that sacrifices of the flock (i.e. sheep and goats) were to be killed before the tent of meeting (verses 8, 13). That a distinction in place was intended must be evident from the change in the terminology.

(which, like all other citations, are here taken from the Revised Version), 'If, therefore, thou art offering thy gift at the altar, and there rememberest that thy brother hath aught against thee, leave there thy gift before the altar, and go thy way; first be reconciled to thy brother, and then come and offer thy gift.'

The north gate of sacrifice is generally spoken of under the name of 'the door of the tent of meeting.' Both it and its 'screen' are referred to in Numbers iii. 26, as explained in chapter 1 of the history of the Tabernacle (pp. 4, 177). It continued to bear this name until after the restoration from Babylon, Zechariah, the son of Meshelemiah, having been appointed, in David's time, 'Northward' (1 Chron. xxvi. 14). In re-recording this arrangement the writer of 1 Chron. ix. 21 writes that he 'was a porter of *the door of the tent of meeting.*'

The Origin of the *Soreg* or Fence.

We have not yet, however, learned all the lessons which the discovery of this north gate is capable of teaching. Placed where it is, at the junction of the two squares (soon to become separate courts), it afforded entrance not only to the sacrificing laymen of the Jewish Church, but also to its priests. From the beginning to the end of the sacrificial dispensation the priests had their own separate entrance into the Temple courts. The laity being forbidden to set foot within the inner square,[1] there

[1] The supplementary rule by which the laity were excluded from the inner court of the sanctuary is given in the words, 'Henceforth the children of Israel shall not come nigh to the tent of meeting, lest they bear sin, and die' (Numbers xviii. 22).

can be little doubt but that they were (when sacrificing) given admission to the outer square by the eastern half of the entrance-way on the north.

At this point comes into view, not clearly, but dimly through the haze of far-off centuries, the first inception of the *Soreg* or fence, which played so prominent a part in the history of the later temples.

As the Levites were forbidden to enter the sanctuary building or to touch the vessels of its service, but might enter the inner court for service (Numbers xviii. 23; Ezekiel xliv. 11), so those who were neither priests nor Levites might enter the outer or eastern court, but might not go farther, or come near to the sanctuary of the Tabernacle. Permitted to throng around, and even to touch, the altar on three of its sides, they were strictly forbidden to pass the boundary-line which separated one square or court from the other. It, therefore, became necessary, from the beginning, to make some upstanding line of demarcation between the two, which, while restraining the multitude, should allow the sons of Levi to pass to and fro from one court to another accomplishing the duties of their office. Such a line would seem to have been found in a row of young palm-tree pillars planted on the marching boundary of the two courts. Every other one (i.e. every alternate one) of the spaces thus formed was filled with palm-branches interlaced. The evidence for this will appear later. Here only it is noted as having formed the 'fence' which divided the two courts, and had its termination at one end in the centre of the north gateway.

This sacrificial gate is frequently referred to in the Pentateuch, always under the name of the 'door of the tent of meeting.' Early instances are, Exodus xl. 12; Leviticus i. 3; Numbers vi. 10. It is to be carefully distinguished from 'The door of the tabernacle of the tent of meeting,' which is quite another element of the design.

From Leviticus viii. 3, 4, we learn that at the consecration of Aaron and his sons all the congregation was assembled without this 'door' or north gate. It thus became the place of assembly for all Israel on great ceremonial or state occasions (Numbers x. 3; Josh. xix. 51). From the position of the Shiloh site of the Tabernacle, these crowds would stand on gently rising ground, tier above tier. There was thus no attempt made to crowd 'the thousands of Israel' into the narrow space of the outer court. When filled it would not afford standing-room for more than 5,000 persons.

The East Gate.

A point of cardinal importance to be noted in the reconstruction of the eastern side of the court is that there were on that side fifteen cubits of 'hangings' in each of its corners. That is, there were three spaces of five cubits each, involving the use of four pillars on the right and four pillars on the left. These having been accounted for in the drawing as separate entities, there remains the construction of the gate itself. The hangings for this were not of fine twined linen, as were all the other curtains around the court, but of embroidered work in blue, purple, and scarlet, on a foundation of white.

The hangings for the gate of the court were thus similar in appearance to the 'screen for the door of the tent' opposite to them.

Of the fifty cubits of which the width of the court consisted throughout, thirty were taken up at its eastern side by the two lengths of corner curtaining. Twenty remain. To these twenty cubits four pillars were specified, giving three spaces of $6\frac{2}{3}$ cubits, or exactly ten feet to each.

Two variations from the ordinary appearance of the enclosing curtains have now been brought into view. One, the embroidered appearance of the screen-of-the-gate curtains themselves. The other the greater length of each curtain.

A third appears in the fact that we cannot imagine the end pillars of the court and the end pillars of the gate as being socketed side by side, and touching one another. Such bad form in architecture was impossible to the best art of that day, leaving out of view the claim of the Tabernacle and its court to have been constructed after the 'pattern' of the Mount.

It is true that no relative position is given in the record to the screen of the east gate. We are not told that it was to be in the line of the hangings, or that it was to be a certain number of cubits eastward of that line.[1] In this very openness of the question is to be found the proof of its not having been on the line.

[1] The statement that the height of the screen, in the breadth of its curtains, was answerable to the height in cubits of the hangings of the court (Exodus xxxviii. 18), certainly implies that it was a separate erection, and as such may have been a removable one.

That first authority on Eastern architecture, the late James Fergusson, has observed that the word 'gate' in Eastern languages has not the meaning of passage-way, with enclosing door attached, which it has in Western languages. When it is stated (to take one passage out of many) that Mordecai sat in the King's gate, we are to understand that in the Persian palace there was either a separate hall or a well-defined space to which the name was given. The word gate (= *shaar*) in the Old Testament has generally, if not universally, this meaning, separate words being used for door (= *deleth*), threshold (= *saph*), and opening (= *pethach*).

It is in this sense that the description in Numbers iv. 26, 'The screen for the door of the gate of the court,' is to be understood. It was a screen of exactly the same width as the 'door of the gate,' but placed at some convenient distance away from it, so as to *screen* the opening without closing it.[1] That distance was left indeterminate and unexpressed, for the reason that it was to be decided by the necessities of time and place. The screen of the gate was, in fact, a moveable item, so as to meet the growth of the nation's numbers in the future.

It was at the gate of the people, thus understood, that the elders sat, on lawful days, for the administration of justice. In this space, and within sight of the altar fires, the strangers and the foreigners (who were in many cases alien slaves) stood to worship the God of Israel 'afar off,' not being allowed to come within the court of

[1] Josephus speaks of the east gate as having a 'vestibule' (*Antiq.* III. vi. § 2).

the Hebrew people. We thus obtain from a single word, when understood in its Eastern sense, a flood of light on the early religious polity of the Jews, and as we proceed we shall find that, in later ages, the most unexpected results were evolved out of this factor of the Tabernacle construction.

We may now, however, return to the site of the Tabernacle when at Shiloh. It will be remembered that this was found to be of the right width, but 262 feet longer than was requisite for the actual court, as it was curtained off. In this excess we have the requisite room for the placing of the three embroidered curtains which marked the eastern extremity of the gate. Standing upon this spot, we may recall the judicial scenes of Joshua's later life.

Here Eleazar, the son of Aaron, judged, and here, centuries later, Eli sat, and here died. With him died also the glory of Shiloh, the site of which is adduced to-day as a witness for these pages.

The Great Altar of Sacrifice.

On entering the Tabernacle court by either of its openings, we find ourselves opposite to the brasen[1] altar of sacrifice. This is so called in these pages in order to distinguish it from a small altar, which had its place within the holy chambers, and was known as the golden altar of incense.

(A) Approaching the great altar, we find it raised

[1] This is the spelling of this word in the R.V. *passim*.

above the ground, by being placed on a platform of sods or unhewn stone. No specific instructions as to the height and size of this platform are given, thus permitting of its enlargement from time to time. Its existence is involved in the directions given as to the material of its composition, and as to the mode by which it was to be ascended. These may be found in the last verses of Exodus xx., the word 'altar' in verses 24 and 25 being understood of the altar-base, and in verse 26 of the altar itself.[1] Steps were not to be used for the ascent to the altar proper, and to the end of the Mosaic economy it will be found that the great altar was always reached by an inclined plane or slope.

Mounting this, the worshippers stood beside the altar of acacia-wood, overlaid with brass. A full description of this is given in the first eight verses of Exodus xxvii., and if the scale of the ordinary cubit be applied to this specification it will be seen that the original altar of the Tabernacle had the appearance of a large shallow box, which, when placed upon level ground, required neither steps nor slope to reach its topmost ledge, or any part of its receptacle for sacrificial meats. It was but three cubits ($= 3\frac{3}{5}$ feet) in height, and was six feet in the square.[2]

[1] The altar proper was a box of acacia-wood, covered with brass plates, and *could not*, therefore, be the same as the altar of earth or unhewn stone. In Ezra iii. 3 we read, 'they set the altar upon its base.'

[2] If we suppose the altar to have stood upon a base of two cubits in height, it would then have the three dimensions of a cube, being six feet in height. With the example of the cubic shape of the Holy of Holies before them, this was almost certainly the case. In the holy city seen by John the length and the breadth and the height of it were equal (Revelation xxi. 16).

It is thus seen that priests desirous of placing on its grating sacrificial portions of offerings to be burnt had no need to do more than stand beside the altar, and upon some portion of the raised platform, the surface-level of which had been reached by the slope seen in the drawing.

It will be noticed that two such slopes are drawn. And for this reason:—The altar was always approached from the east; in like manner as the court of the Tabernacle was entered from the east. It was the most highly valued privilege of every worshipping Hebrew to stand beside the altar at the crisis of his devotions, or when the fat of his sacrifice was being consumed upon it.[1] The touch of the brasen altar brought forgiveness and sanctity to the sincere penitent. No passage of the Law was to him more significantly dear than that which proclaimed, 'Whosoever toucheth the altar shall be holy' (Exodus xxix. 37).[2] We have the New Testament complement of this in the miracle of healing wrought on the woman who touched the hem of Jesus' garment, as well as in many other of His miracles.

As, therefore, every son and daughter of Abraham who obtained permission to enter the court of the Tabernacle availed himself of the right to touch the brasen altar, we are to infer, on the great feast days of the Jewish Church,

[1] 'I will wash my hands in innocency; so will I compass Thine altar, O Lord' (Psalms xxvi. 6).

'The altar that sanctifieth the gift' (Matthew xxiii. 19). This was an extension of the same principle, from persons to things inanimate.

[2] The same sanctity attached to the tent of meeting and all its contents, to the laver, and to all the vessels of the altar (Exodus xxx. 26–29). These, however, neither Levites nor people were allowed to *touch*.

a constant stream of suppliants ascending by the east slope and descending by the south slope. That in the Temples the descent and exit were *to the south* will be shown in later pages of these volumes: the slopes themselves always being of the same width as the altar to which they led.

(B) What was afterwards called the 'bosom' of the altar[1] now merits a moment's attention. This was the hollow space in which the fat of all sacrifices, and the sacrificial joints of all burnt-offerings, were placed, so as to be consumed by the fire which burned below. A brass grating, in one or more pieces, formed the bottom or floor of this receptacle. This was placed half-way up the altar, and rested upon interior ledges. The fire itself, divinely kindled and never allowed to go out, burned on the hearth, i.e. on the upper surface of the platform, which was about 21 inches below the grating (Exodus xxxviii. 1–7).[2]

(C) It is most desirable to fix the exact position of the altar with relation to the Tabernacle. These two divinely-ordered erections cannot rightly be said to occupy first and second places in regard to each other. Hence it is improper to say either that the Tabernacle belonged to the altar or the altar to the Tabernacle. Each had its own court or square, and in that had the first place.

[1] Ezekiel xliii. 13, *margin*.

[2] The distinction between these is referred to in Ezekiel xliii. 15, where the hearth, on the upper surface of the platform, is spoken of as *Ariel*, or the Lion of God, owing to its fiery powers of destruction. The actual altar that stood above this is called *Harel*, the Mountain of God.

From Exodus xl. 29, and Leviticus i. 5; iv. 7, there can be no doubt that the altar was brought as near to the Tabernacle as possible; other factors show that its western edge was placed on the *Soreg*, or boundary-line which separated the two courts.[1] This involved that a part of the platform on which it stood should have been built in the inner court, as is shown in the outline-plan of the court and Tabernacle already given (p. 171). This arrangement was continued in the temples.

Philo, an Alexandrian Jew, who wrote 40 A.D., says that the two sides and the back of the Tabernacle court, i.e. the clear spaces, were all of equal width, whereas the space in front was fifty cubits square.

This position for the Tabernacle within its court is quite in harmony with the fitness of things, and is one that would commend itself to the orderly and reverential mind of the early Hebrew. By adopting it in the accompanying drawings, and giving to each side of the platform a length of 18 feet,[2] we find that there was just room for the brasen laver in its appointed

[1] The line of the *Soreg*, on each side of the 6 feet altar, to the edge of the court was 34½ feet. The spaces, alternately filled and unfilled, were conjecturally each 2½ cubits (= 3 feet) in width. Ten such were on either hand, leaving a space of 4½ feet on the platform where the priests might pass and repass. There was thus an indication of the *Soreg*, on the platform, of eighteen inches.

[2] As the platform had relations in size with the altar, which was built in medium cubits, and with the width of the court, which was measured in large cubits, it is necessary to find a figure which is commensurate with both. This is found in the identity of twelve large cubits and fifteen medium cubits, each being 18 feet. This gave a walk six feet wide on each of the four sides of the altar.

place 'between the tent of meeting and the altar' (Exodus xxx. 18).[1]

There was thus no passage-way between the altar and the Tabernacle,[2] a fact which is full of profound significance to the devout mind. This was all the more striking, as it was on the western corners of the altar that the sacrificial and atoning blood was sprinkled, the remainder being poured out into the drain at its foot.

The Tent of the Tabernacle.

Any proposed delineation or model of the tent of meeting, which does not allow of a distinction being made between the Tabernacle and the tent of the Tabernacle, must err in a point of palmary importance. It is to be observed that there was, in the wilderness of Sinai, both an altar and a tent of meeting, *before there was a Tabernacle.* Immediately after the covenant of the Ten Commandments had been ratified by their formal popular acceptance, Moses built an altar under the Mount, and set up, near it, twelve memorial pillars, one for each of the Tribes of Israel (Exodus xxiv. 4). It was when standing beside this altar and these pillars that the people were cleansed with the 'blood of sprinkling.'

[1] A section of the inner court, taken from west to east, would give:—

Space behind Tabernacle	13 cubits =	19½ feet.
Length of Tabernacle	32 cubits =	48 ,,
Space for laver	1 cubit =	1½ ,,
Projecting portion of altar-base ...	4 cubits =	6 ,,
	50	75

[2] The blood of some sacrifices was sprinkled 'upon the side of the altar' (Leviticus v. 9). That of others, 'round about upon the altar' (Lev. i. 5). In neither case would the priest require to stand *between* the altar and the Temple.

After the account of the *first* forty days spent in the Mount (Exodus xxiv. 18) we have the curious statement that Moses used to take the tent and to pitch it without the camp, afar off from the camp, and he called it the tent of meeting (Exodus xxxiii. 7). By which we are to understand that the outspread covering forming the tent proper was carried to and fro between the camp and the altar, and was hung upon the twelve pillars standing there only on Sabbaths and at such times as the worship of Jehovah was in progress.

This temporary arrangement was ended by the realization of the vision shown to Moses during his *second* stay of forty days in the Mount (Exodus xxxiv. 28), when the plan of the altar and of a permanent and portable place of worship was showed to him, being the pattern of things in the Heavens.

During the five or six months in which the new Tabernacle was being built (it was reared up on the first day of the second year of the Exodus) the old transition state of affairs remained, and divine worship continued at the altar and pillars which stood at the nether part of the Mount.

We cannot conceive, the twelve tribes remaining, that the twelve memorial pillars of witness standing for them and on their behalf, beside the altar, should have suffered any alteration of number in the new erection. As the names of the tribes were engraven on the twelve stones of the breastplate, so the dedicated pillars of the new Tabernacle could not be other than twelve in number.

The recognition of this principle of continuity brings

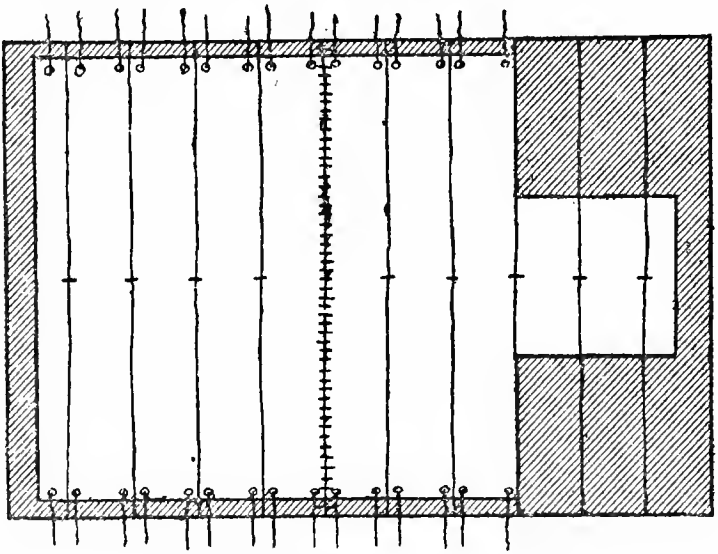
into view the first element of the tent of the Tabernacle which is to claim our attention. It is that of the three pillars which supported the ridge-pole of the tent. These are not expressly mentioned in the accounts given to us of the Tabernacle, either in its specification or its description. But their existence is necessary, not only to retain the number of pillars in the Tabernacle as twelve, four and five others being mentioned, but also to support the ridge-pole, which is spoken of as 'the middle-bar, passing through in the midst of the boards from the one end to the other' (Exodus xxxvi. 33).

These pillars being granted as essential to the support of the tent (as distinguished from the Tabernacle), we have to consider next the covering curtains, which stretched across the ridge-pole and, fastened down on either side by tent-pegs, formed the outer covering of the holy chambers, and is referred to in the closing chapter of Exodus (xl. 18–19) in the distinctive double record—'And Moses reared up the Tabernacle . . . . and he spread the tent over the Tabernacle and put the covering of the tent above upon it.'

The Eleven Curtains.

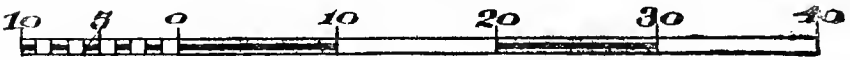
In the above citation we have brought before us the two elements of which the covering of the tent consisted, there being now no question of the Tabernacle, or any portion of it, within view. These two elements were: the woven fabric which formed the outspread tent proper; and its 'covering' which, from the name given

to it, we know to have been its outer protection against the vicissitudes of the weather—rain, hail, sun, and storm.

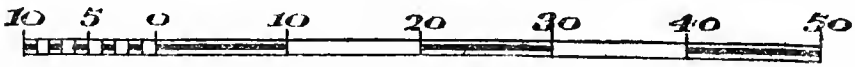


THE ELEVEN CURTAINS.

(*The shading shows the portions of covering which overhang ends and sides.*)



SCALE OF MEDIUM CUBITS.



SCALE OF ENGLISH FEET.

The former of these, the tent-spread, was ordered to be woven in eleven strips, and to be composed of goat's hair, dyed in three colours.[1] It is the width given to these

[1] Five curtains were blue, three scarlet, and three purple. It may not be altogether chimerical to give some traditions as to the shades of the colours employed. The *blue* was that of the wild hyacinth flower, or that of the

eleven curtains which has hitherto been a stumbling-block to all restorers of the Tabernacle. The late James Fergusson, writing in Smith's *Bible Dictionary*, declares the problem to have been till then insoluble. It is true that he advances a theory, which, being based upon the assumption that there was but a single cubit-length, is as inadmissible as any that had preceded it.

Let us now proceed to state the conclusions to which we are brought by the new theory of the triple-cubit, as derived from Babylonia, and embodied in the erections described in the chapters of this volume. Before doing so, however, it is necessary to deal with another factor of the area to be covered in, hitherto unmentioned.

That factor is the porch which stood before the Tabernacle. Here, again, we are met by the brevity and ambiguity of the Hebrew records. When once the clue to the structural meaning of the writers has been obtained, it is not difficult so to follow it as to find in the pages of the Pentateuch abundant proofs of there having been a porch, and to discover many references to it in the terminology of the Old Testament. Josephus shall be our guide here. From his *Antiquities of the Jews* we learn that the Tabernacle consisted of three parts, into two of which the priests went daily in the course of their ministrations. But into the third the High-priest went but occasionally. This we know to have been the

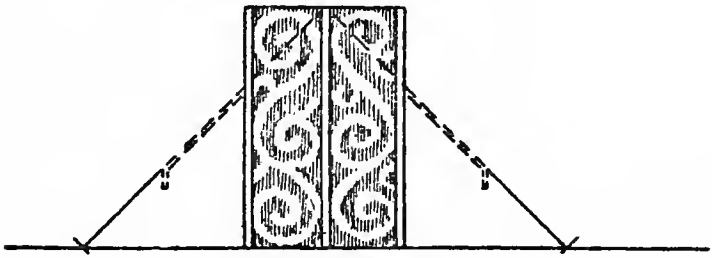
colour of a sapphire stone. The *purple* was akin to that of porphyry. Some of the later Roman royal statues have the heads of marble and the dress of porphyry, as representing the actual colour of the robe. The *scarlet* was of a blood-red colour.

Holy of Holies. The middle one of the three spaces was that known as the Holy Place, 'wherein were the candlestick, and the table, and the shew-bread' (Hebrews ix. 2). Outside of this was a third space, presumably of the same area as the Holy of Holies, to which is given the name of the Porch, though this was not its designation till the building of the Temple. In Exodus, Leviticus, and Numbers, it is usually spoken of as 'the door of the Tabernacle.' A previous section of this chapter has already shown to us the Eastern and archaic meaning of the word 'gate,' as a defined space, and not a mere entrance-threshold or passage-way. In harmony with this meaning is that of the word 'door' as used in the description of the Tabernacle, now before us.

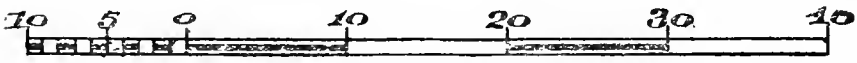
The adoption of this ancient signification as applied to the texts in which the 'door of the Tabernacle' is spoken of, will at once relieve us of two great architectural difficulties which have till now baffled all reconstructions.

One of these is the allocation of the five pillars. These are spoken of as being the five pillars for the screen of the door of the tent, and as standing in five sockets of brass. It is not, however, necessary to suppose, as does Fergusson, that all the five pillars were used simultaneously on which to hang the screen of the door. All were provided with golden hooks for this purpose, as, in a portable structure, sometimes one pillar would be used and sometimes another. All had their capitals and fillets gilded, with the same object of interchangeability. The screen, which had a requisite width

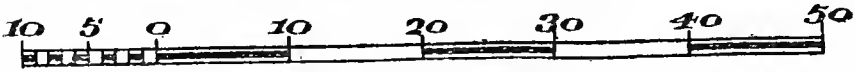
of twelve feet only, was hung upon two of the pillars at its two upper corners,[1] the centre of the screen being supported (if necessary) by an attachment to one of the three tent-poles which stood in the same line as the two inner pillars.



THE SCREEN OF THE TABERNACLE.



SCALE OF MEDIUM CUBITS.



SCALE OF ENGLISH FEET.

By this arrangement of the five pillars, as figured upon the Tabernacle plan (p. 171), we avoid Fergusson's departure

[1] Like the veil of the inner sanctuary, the screen of the door was hung on the inner or western face of its supporting pillars. As it was rectangular, and fifteen cubits or eighteen feet in length, it passed upward between the eighth and ninth curtains of the tent. These being coupled together by a single attachment at their centre, permitted of this. This single coupling likewise permitted of the *three* and the *eight* curtains being hung at different angles, as shown in the accompanying representations. The portion of the tent which covered the Tabernacle was thus 'screened' from the view of worshippers while standing around the altar.

from the text in having *six* such pillars. We also gain the third space claimed by Josephus in his *Antiquities*, III. vi. § 4, and vii. § 7. Thirdly, we satisfy the requirements of the text as to the conjoined width of the eleven curtains of goat's hair.

These requirements are that each of the eleven curtains should have a width of four cubits ($=4\frac{4}{5}$ feet), giving a total width, when conjoined, of $52\frac{4}{5}$ feet. Of the eleven, one was deducted from this extension by being hung, in halves, over either end of the tent, leaving 48 feet of curtaining to deal with. The application of the medium cubit to the Tabernacle boards will show that the Holy of Holies was a cube of 12 feet, and that the Holy Place had a length of 24 feet. To these we must now add the area of the newly-recovered porch, which we suppose to have had a floor-superficies of 12 feet square. In these three areas we have the space required to be covered in by the 48 feet of which the goats'-hair curtain consisted, when its component parts were placed side by side and coupled together, one width having been deducted for flap-ends.

The Ram-skins dyed red.

The eleven curtains of woven goats' hair formed the tent proper. This was spread over the Tabernacle, and there was prepared for it a special 'covering' in order to its preservation. This was put 'above upon it,' as stated in Exodus xl. 19.

In the LXX. version of Exodus xxvi. 7 the translation of the Greek reading is, 'Thou shalt make for a covering

of the Tabernacle skins with the hair on.' These were the ram-skins, dyed red, which we are told the people contributed for this purpose.

There is no reason to conclude that these skins were those of sheep rather than those of goats. The probability is the other way, the inner ten curtains being woven of wool, the outer eleven of goats' hair. The presumption is that the skins sewn together, with the hair unremoved, which rested on the latter, were those of goats, as the Hebrew prejudice against commingling is well known. Not only are the skins of goats more durable than those of sheep, and therefore fitter for this purpose, but the fact of their being dyed red would seem to indicate that this was done to avoid the exhibition of the many colours common to goat-skins. With the hair turned one way in making up, these skins would form an outer covering, impervious to rain.

Besides the outer covering to the tent of goat-skins dyed red, there was also a covering of porpoise hides above that (*margin*, Exodus xxvi. 14).

I apprehend this to have been merely a series of these waterproof skins which lay above the ridge-pole, and protected the central seam of the goat-skins.

I am confirmed in this view by a remark in the Jewish treatise on the Tabernacle, cited by Barclay (*Talmud*, p. 338), that the covering-above of the tent was 'like patchwork,' i.e. like a piece of cloth upon a garment. To this may be added the fact, recorded in the 4th chapter of Numbers, that on the removal of the Tabernacle from

one site to another, certain articles of its furniture were to be wrapped in these porpoise-skins. They were these six: the Ark of the Covenant, the table of shew-bread, the golden candlestick, the altar of incense, the brasen altar of sacrifice, and all the vessels used in the sanctuary. It is thus evident that these porpoise-skins were not sewn together, and that they were at least six in number.

Porpoise hides are still a valuable trade commodity on the shores of the Red Sea, and an ancient Cuneiform inscription states that 'skins of sea-calves' were amongst the articles of tribute sent by Hezekiah to Sennacherib. There is every reason, therefore, to infer that *they* were used in the construction of the Tabernacle at Sinai, as porpoises have always abounded in the Gulfs of Suez and of Akabah.

CHAPTER II.

THE TABERNACLE WITHIN THE TENT.

'THE Tent (= *ohel*) which was the covering thereof,' having been shown to have been a secondary and separate construction to the Tabernacle (= *mishkan*), we are now in a position to deal with the fabric which was the ordained place of meeting for Jehovah and His people, as represented in the person of their High-priest.

We are thus at liberty to assume that the command 'Let them make Me a sanctuary' (Exodus xxv. 8) was an entirely new idea to the faithful, and marked a distinct epoch in the religious history of the world.

The way in which this command was carried out is now to engage our attention, and it may be of advantage to know that no insuperable difficulties will be met with, either in the piecing together of its various parts or in the placing of the whole within the limits of the tent built for its protection and seclusion.

1. The Floor of the Tabernacle.

As both tent and Tabernacle were constructed with the idea of their removal from place to place, it may be

advisable to deal, first, with the way in which stability was given to the framework of the latter. Each of its forty-eight boards had two tenons mortiсed into every board. These tenons, when in use, were placed in sockets of silver, there being ninety-six such sockets for the forty-eight boards, and four others for the four pillars of the veil—100 in all. Each socket was cast or wrought in a talent of silver, and was of considerable weight.[1] I do not think that these sockets were driven into the ground, or even placed in holes dug for the purpose, but that they were placed on carefully levelled ground, and a stone pavement built up around them. This form of masonry was largely used in the Temples on Mount Zion, and I incline to the belief that it was adopted there from the usage of the Tabernacle. In Exodus xl. 18 the sockets are said to have been 'laid.'

A further consideration, looking in the same direction, is this:—In the vision of the God of Israel given to the seventy elders and others, described in Exodus xxiv., 'there was under His feet as it were a paved work of sapphire stone.' This revelation was given before that of the Tabernacle, and would be associated with it in the minds of the beholders. It is, therefore, probable that the floor of the Tabernacle and tent was at all times paved with stone—a precaution easy to be carried out

[1] Professor Petrie estimates the weight of a talent of gold at 135 lbs. troy, and to contain 160 cubic inches of gold (Hastings' Dictionary, *art.* Goldsmith). The same weight of silver would produce a brick of half-a-cubit (= 7·2 inches) in length (which dimension, or some fraction thereof, is imperative), of the same height, and of half the same width, when the socket had been allowed for.

in the desert, and necessary to the cleanliness of the building. The present paving on Mount Moriah may be a relic of this early custom. It is five acres in extent.

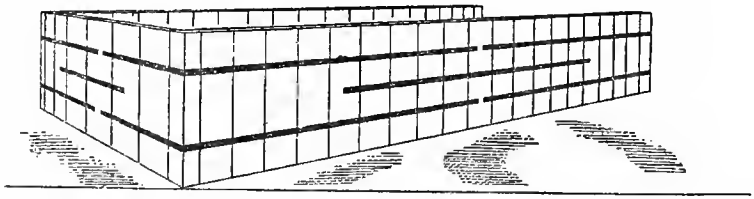
2. The Boards of the Tabernacle.

1. We have an exact account of the forty-eight boards or planks which, when placed on end, formed three of the four sides of the Tabernacle. Of these, twenty stood on the north side and twenty on the south side of the Tabernacle. Six others formed the west wall, and two were the corner-pieces of the erection. These last are described[1] as having been cut, in a single piece, out of the trunk of a tree, and so adzed and hollowed as to form an angle, not requiring the use of pegs or nails. This is taken to be the primary meaning of the rather laboured description in the 24th verse of Exodus xxvi.

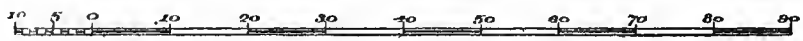
With the secret of the cubit-length before us, it should not be impossible to discover the exact size of the forty-eight boards. The text informs us as to two of their dimensions. Josephus shall aid us as to their third. Ten cubits being stated to be the length of each board, we take twelve English feet as the equivalent of this. A cubit and a half being the breadth of each board, we may know that it was $21\frac{3}{5}$ inches in width. These are

[1] By Josephus *in loco*. His words are, 'They made two other pillars, and cut them out of one cubit, which they placed in the corners.' The meaning evidently is, that the tree-stem when squared was a cubit square. This was then cut out, on two of its sides, so as to leave an angle of a palm in thickness. The cubit here is thus one of three hand-breadths, as the total measurements show.

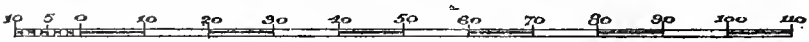
measures that are not impossible, when we remember that the Sinaitic peninsula still contains trees from which such planks may be cut, and that it was more thickly wooded in ancient times than it is now.



THE FORTY-EIGHT BOARDS.



Scale of Medium Cubits.



Scale of English Feet.

As to the thickness of each plank, Josephus tells us (*Antiquities*, III. vi. § 3) that they were four fingers in thickness, and again, in the same paragraph, that the thickness was the third part of a span. We thus arrive at the conclusion that the palm of 3·6 inches was taken as the standard of their through-measure, and that three

such palms made a span or small cubit, which testimony is in harmony with all that we learn elsewhere on each of these points.

2. We now come to an architectural point of some importance in its bearing upon the internal measures of the two holy chambers, which is that of the place occupied by the veil which separated them, and of the screen which hid them. It is this:—Six boards, each of $1\frac{1}{2}$ cubits in width, stood at the west end of the Tabernacle. Together, they gave nine cubits of walling, leaving the tenth to be made up, in halves, by the two corner-boards which held the fabric together. It is obvious that to secure the ten cubits in width of which the Holy of Holies consisted, this half-cubit (= 2 palms) must have been taken from the *inner* angle of each of the corner-boards, and not have been their outside measurement. Thus far there is no difficulty as to the appropriation of the spaces created by the up-rearing of the corner-boards.

But one now comes into view. It arises thus:—On either of the two sides of the Tabernacle, north and south, there stood twenty boards, giving 30 cubits (= 36 feet). This is the measure of the two chambers jointly, one being 10 and the other 20 cubits in length.

Just as, however, there was half-a-cubit in each of the corner-boards added to complete the west side, so there must have been half-a-cubit to add to the length of each of the other sides, the angular shape of the corner-boards being remembered. This was, therefore,

an 'excess' above what was required. Half an ordinary cubit, or two palms width, was the measure of this excess, and its disposal has been arrived at by the creation of a model of the Tabernacle, in which it is found that a space of one palm (= 3·6 inches) is required for the four pillars supporting the veil between the chambers, and another palm for the pillars of the screen which closed in the holy chambers.

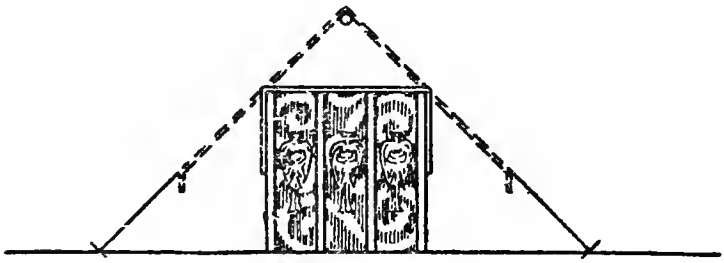
The chambers themselves were thus of the exact interior measures given, and the whole account is justified as that of supreme wisdom guiding an architect to the creation of a meeting-place for God and man, in which the utmost exactitude and simplicity are joined to the greatest reverence and dignity.

3. The Veil and its Four Pillars.

The Veil of the Tabernacle has for us a peculiar interest, as it was the only part of the original structure which remained unchanged while the sanctuary of God stood. The first two Evangelists tell us that in the Herodian Temple it was rent in twain from the top to the bottom, and Luke adds that this total separation of its parts was 'in the midst.' The writer of Hebrews x. 20, in a single line, fixes its symbolic meaning in the words, 'The veil, that is to say, His flesh.'

Known unto God are all His works from the beginning, and a singular sanctity attached to the curtain which divided the two holy chambers from one another. The material of which it was composed was wool, dyed in the

three sacred colours of blue, purple, and scarlet.[1] This formed the woof, the warp being composed of fine twined linen.[2] To mark its separateness the whole nation was forbidden to wear a mingled stuff — wool and linen together[3] (Deut. xxii. 11); just as they were forbidden to make any unguent composed like the holy oil with which High-priests were consecrated.



THE INNER VEIL.

The veil, being woven[4] in a single piece, to a size of 12 feet square, which we now know was the size of the opening between the chambers, was then embroidered in gold thread with the forms of three or more cherubim. The materials of which the High-priest's ephod was composed were the same as those of the inner veil, and it is in the description of this (Exodus xxxix. 2–3) that

[1] Both wool and mohair were dyed in the bulk and spun, when presented for weaving (Exodus xxv. 25, 26).

[2] 'The warp is nothing but fine linen' (Josephus, *Ant.* III. vii. § 2).

[3] This was permitted to the priests only (Josephus, *Ant.* IV. viii. § 11).

[4] Weaving was one of the arts used (Exodus xxxv. 35). The Bedaween women of to-day spin, dye, and weave wool and hair for their tents. The strips when woven are about a yard wide.

we find an account of how the work of embroidering the Cherubs was effected. The artist is always spoken of as 'the cunning workman,' and his gold embroidery as the work of the cunning workman. 'They did beat the gold into thin plates, and cut it into wires, to work it in the blue, and in the purple, and in the scarlet, and in the fine linen.'

Besides the High-priestly robes and the veil of the sanctuary, the only other fabrics so embroidered were the ten curtains which enclosed the Tabernacle in the whole of its length.

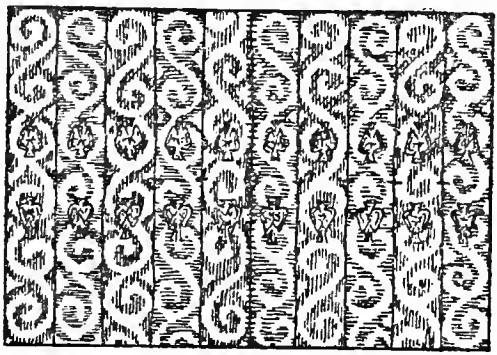
As to all these, there is one feature which calls for remark. It is, that the embroidery, and possibly the woven tapestry of which the whole set consisted, had no wrong or seamy side. In the subsequent days of the Judges we have, in the Song of Deborah, a description of the spoil which it was hoped Sisera would take from the Hebrews. Its last item was: A spoil of divers colours; a spoil of divers colours of embroidery; of divers colours, embroidered *on both sides* (Judges v. 30).

Such was the famous embroidery work of the Egyptians, where the art of its creation, lost among ourselves, still survives. Such too, in all likelihood, was the goodly Babylonish mantle which Achan coveted and stole at Ai.

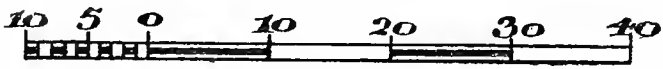
This veil or curtain, heavy with gold thread, but having no measurable thickness, was hung upon the inner side of the four pillars[1] which stood, in their silver

[1] Exodus xxvi. 33 is not to be literally understood, but generally, in its first clause. The 'veil' was 12 feet from the west end, and the 'clasps' 18 feet.

sockets, between the two chambers.[1] Once in every year the curtain was lifted, and the High-priest, clothed in robes of white linen, entered, to make atonement for himself and for the sins of the people.



THE TEN CURTAINS.



SCALE OF SMALL CUBITS.

SCALE OF ENGLISH FEET.

[1] These four pillars would give three inter-columnar spaces. If to each of these be given a width of three cubits ($3\frac{3}{5}$ feet), one cubit remains, in which to place the bases of the pillars. As the cubit here used was one of four palms, it is inevitable that each pillar should have stood in a square of 3·6 inches. This was the width of the 'excess' in this part of the Tabernacle, as has been already shown (pp. 197–198).

4. The Ten Curtains.

1. The ten curtains which overhung the Tabernacle were of similar make and ornamentation to the veil of the Holy of Holies, already described. We have, however, in their case a factor given in the specification which we have not in the case of the veil. It is that of their measurement. To them is given, in Exodus xxvi. 2, a width of 4 cubits and a length of 28 cubits. Being embroidered with figures of cherubim worked in gold thread, they naturally fell under the goldsmith's measure of construction, as we cannot suppose that different measures were used in the preparation of the same article. When conjoined, their width would thus be 40 small cubits, equal to 30 medium cubits (= 36 feet). Thirty cubits and a half being the length of the Tabernacle boards when placed in position, it will be seen that the ten curtains nearly enclosed it on its upper side. The union of the two sets of five curtains in the middle would allow of the protrusion there of the second tent-pole of the three which supported the ridge-bar.

The diameter of this tent-pole we may appropriately suppose to have been that of a palm of 3·6 inches, in which case it is permissible to think that the 50 loops in each selvedge of the two edge-curtains[1] were of this

[1] The loops were of a blue colour (Exodus xxvi. 4), as also were the five non-embroidered curtains which overhung the Holy-of-Holies. This we know from the fact that *five* such curtains are specified to be used in the removal of the Tabernacle furniture (Numbers iv.). These, of course,

length when joined together. The other palm-length, requisite for the fitting of the curtains so as to wholly cover the Tabernacle boards, was obtained by placing the front tent-pole and the two inner pillars of the porch within the range of the upright boards forming the sides of the Tabernacle. In this way the literal accuracy of the text is preserved, as well as the construction difficulties overcome. We gain, at the same time, a reason for there being so many as 50 couplings in the union of each of the two sets of curtains, they being 3·6 inches apart, while there was but a single one in all other cases, which one was at the centre.

This open space, overhead, in the middle of the sanctuary, served another purpose than that of allowing the passage of the tent-pole.

Not only was there the refuse air from the seven-branched candlestick which was lit every night, but there were the clouds of incense, which was burned twice daily in the holy place, to get rid of. It was therefore in obedience to that sanitary law which pervades the enactments by Moses, that there should be the means of thorough and constant ventilation in the Tabernacle.

2. The use of a single cubit-length in the conception of the Tabernacle has hitherto rendered abortive all

were the curtains of goats' hair, three others being scarlet and three purple. It is probable that the purple curtains overhung the porch, as Josephus, who had seen them, tells us that the curtains of the porch in the Temple of Herod were 'purple' (*War of the Jews*, VII. vi. § 7).

attempts at its reconstruction. Two illustrations of the difficulties encountered may be given. One is from the English translation of the Bible, 1576 A.D., known as the Geneva or 'Breeches' Bible. A marginal note to a woodcut of the first covering of the Tabernacle reads, 'Two curtains and a half hung from the rear of the Tabernacle.' While in the *Gemara* on the treatise *Shabat*, the Rabbins say: 'The ten curtains were of 28 cubits. Take away 10 for the roof, there remain 9 cubits to this side and 9 to that. So that one cubit of the boards was uncovered.'

It is thus evident that while the Jewish authorities of old days had lost sight of the short cubit as applicable to the ten curtains, they did not, as did Mr. Fergusson, suppose other than that they hung directly over the boards of the Tabernacle. The recovery of the true length of these curtains—their width has already been dealt with—enables us to see that of the length given to each and every curtain of the ten, of $25\frac{1}{2}$ feet, 12 were taken to cover the interior spaces of the two holy chambers. Of the remainder, $\frac{3}{10}$ of a foot, on either side, rested on the gilded boards of the Tabernacle walls. Of the remainder of each curtain, exactly one-quarter, or $6\frac{3}{10}$ feet of either end, hung down on the outer side of the boards. As these boards were 12 feet in length above the floor, it is easy to see that they were covered to but little more than one-half of their length. The importance of this conclusion, so different from that of the Jewish Rabbis of old, will presently appear in the fact that the priests on duty at the Tabernacle had their

resting-places beneath the eaves of the tent. Had the curtains fallen as low as has been generally supposed, this would have been impossible, owing to the liability of their being soiled.

5. The Stability of the Tent.

1. The Tabernacle and its tent were for nearly three centuries the central home of Jewish monotheistic worship. During these centuries portions of it would, from time to time, require repair and renewal. Of these domestic details there are naturally no records, if we except the statement of the *Mischna* that the curtains of the last Temple were renewed every year, and that the material of the disused curtains was used as wicks for the lamps of the Temple.

What is, perhaps, of more importance for us to know, as tending to the credibility of the narrative, is how, during this long period, the frail and portable constructions of tent and Tabernacle, when once erected, maintained their stability against the stress of wind and weather.

Regarding the former, there can be little doubt, from the silence of Scripture, that the three tent-poles on which the whole depended were placed in holes dug into the ground, and firmly planted. They were simply a transfer to the new system of the old arrangement by which all twelve pillars stood beside the altar. Hence they were neither placed in sockets of any kind, nor was gilding

applied to any part of them.[1] Their height above ground required to be 18 English feet, and we may suppose them to have been of the not impossible length of 20 feet.

This length was the utmost that was required in any single piece of timber in the whole fabric, as neither the side-bars nor the ridge-bar (which was in two pieces) required to be of any more than 18 feet. A fact such as this tends to bring the whole account within the region of possibility, and goes some way to dispel doubts as to the historicity of the whole narrative.

2. When the three pillars of the tent were placed in position, and the middle, or ridge-bar, was placed above them, its junction resting on the centre-pole, the eleven curtains would be stretched across it. Here comes into view one of the previsions of the heaven-instructed plan. For these eleven curtains were not sewn together, but might be separately put into their places.[2] It is true they were 'coupled together,' but this was probably done after their elevation. A single loop of one was placed within a single opposite loop of its neighbour, and a peg of brass (gold for the inner curtains) inserted to keep it in its place. A single *button* of this kind was

[1] As no directions as to them were requisite, they are unmentioned. The want of an historic imagination has long hid them from sight, and it is possible that there are extreme literalists who still refuse to accept them. Their recovery is due to Fergusson, as is that of the centre-bar or ridge-pole which they supported.

[2] This follows from the minute instructions given in Numbers iv. for the removal of the Tabernacle. Six articles were to have covering of porpoise-skins, five of curtains of blue, and one each of scarlet and purple.

all the attachment required.[1] This was uniformly placed mid-centre, and hung above the ridge-pole. This arrangement also made possible the covering of the porch, as shown in the drawing (p. 166). To it there was one exception. Between the fifth and sixth curtains fifty such double loops were specified. The reason for this particular has not yet been discovered, unless it were to allow of the escape of the carbonised air from below. In any case the vacant spaces of the two sets of curtains, i.e. the *ten* and the *eleven*, were not directly above one another. That of the lower set was 18 feet from the west side of the tent, and that of the upper set $21\frac{3}{5}$ feet from the same. In this connection it will be remembered that there were *two* outer coverings to the tent of goat's hair, one of red goat-skins and another of porpoise hides. These were, probably, put on every evening at the closing of the Tabernacle gates, and also at every appearance of bad weather during the day. The incongruity of a narrow opening between the fifth and sixth outer curtain[2] is, in this way, met and disposed of.

3. We have seen that the tent was formed of two sets

[1] These were the 'taches' of the Authorized Version and the 'clasps' of the Revised Version.

[2] The requirements of the space to be covered in, as in the case of the ten curtains, demand that this opening should be of the width of one palm, or a quarter of a cubit. The use of fifty loops in each of the two sets of curtains was intended to secure a ventilation-space, in each, of even width throughout. It would, without these frequent regulators, have had an irregular appearance and been wider in some parts than in others. When this object had been gained, each of the eleven curtains would be kept in its proper place by the straining of the tent ropes.

of woven curtains, one containing five and the other six. We have now to see how these eleven curtains were extended horizontally, and kept in their places. This was done by the familiar method of having tent-pegs—a method which owes its early origin and late survival to the fact of its ease and simplicity.

In one passage (Exodus xxxv. 18) we have a reference to 'the pins of the Tabernacle, ... and their cords,' and in another (xxxviii. 29–31) we learn that these 'pins,' as well as those that supported the pillars of the court round about, were made of brass.

As it was a matter of the utmost importance that these curtains should be hung over the ridge-pole at an angle of 90°—neither more nor less—it may satisfy some querist to know of a simple method by which this could have been done. The site of the future Tabernacle having been selected and levelled, it was but necessary to lay these eleven curtains outspread upon the surface of the ground. By marking their north and south lines when so extended, and by driving the tent-pegs deeply into the ground at the lines marked, the tent itself would have a right angle at its apex, the height of the ridge being 18 feet above the ground, and the tent-pegs being 36 feet apart. The east and west lines, when similarly marked, would be $52\frac{4}{5}$ feet apart, and would give the other limits of the area requiring to be paved.

4. The use of the expression already referred to, 'all the pins of the court round about,' leaves no option but

to think that each of the sixty $7\frac{1}{2}$ feet pillars of the court[1] had its own stay of brass pins and cords, to keep it in position as it stood in its brass socket. There could be here no question of a supporting pavement, so that these sockets were probably buried in the ground. Fergusson has represented these standards as supported in this way.

5. While the length of each of the eleven curtains was 30 cubits (= 36 feet), we are not at liberty to suppose that the whole of this length was extended horizontally in order to form the tent. It was not so, and this introduces us to one of the most fruitful facts about the Tabernacle in its relation to the Temples which took its place.

From Exodus xxvi. 13 we learn that the cords which attached the curtains to the tent-pegs were placed in eyelet-holes at the distance of a single cubit from the ends of the curtains. A relationship of 28 cubits was thus established with the 28 cubits of which the ten curtains consisted, the fact of the cubits in each of these cases being of different lengths notwithstanding.

There was thus produced the mathematical result that the line at which the one-cubit flap of the eleven curtains

[1] It is not certain what was the height of the hangings of the court. It was either five medium or five large cubits (Exodus xxvii. 18 and xxxviii. 18). In favour of the former is the fact that the medium cubit was that usually employed in weaving stuffs. In favour of the latter, the fact that in each case above referred to the 'five cubits' is associated with other measures which were undoubtedly those of large cubits. The height of the *Râmet* enclosure wall is six medium cubits, and is in favour of the greater height of the Tabernacle hangings, as is the fact that they were woven in lengths of five large cubits.

hung down at the eyelet-holes, marked one-half of the ground-space between the Tabernacle boards and the rows of tent-pegs. In other words, there were on either side of the Tabernacle five cubits (= 6 feet) covered in and overshadowed by the tent, and five cubits of space over which the tent cords were strained, and which was open to the sky. In this latter space it is probable that drains to carry off the surface-water were arranged, but whether it was paved or not there is no evidence to show.[1]

6. It is to the other covered-in space, which lay without the Tabernacle and within the tent, that the reader's attention is now directed. We have here a narrow strip of tent-shadow, on either side of the Tabernacle. The gilded boards of the Tabernacle, overhung in part by the ends of the curtains of the sanctuary, form one of its sides on either hand. Below are the paving-stones supporting the silver sockets of the boards. Above is the extension of the goats'-hair curtains, and towards the horizon, on either side, is the fringe of the outer curtains hanging down to the extent of $1\frac{1}{2}$ feet. These two spaces we now know to have been each of the length of 36 feet and of the width of six feet, less the palm of which the thickness of the boards consisted.

[1] The architectural requirements of the case, however, demand that the same general level of flooring should be observed in the whole area. If this were not done the apex-angle of the tent would not be a right angle. The whole area of $36 \times 52\frac{1}{2}$ feet covered by the curtains when used as a measuring-carpet, was probably laid with paving-stones. This need not have prevented there being a depression on either side of the tent, to carry off the surface-drainage.

Each side would thus give six little areas of six feet square — twelve in all. In these, without doubt, the priests on duty in the Tabernacle regularly slept, and they formed the precedent for the priests' chambers, which were so marked a feature of the later Temples, and which ultimately gave rise to the anchorites' cell and the monastic system of the Middle Ages.

The recognition of this use of a portion of the Tabernacle will serve to illustrate many passages of Scripture. Of these one of the earliest is the account of the death of Aaron's elder sons. These had spent seven days and nights at the door of the tent of meeting, as a part of their ceremonial induction to the High-priesthood. On their death the two younger sons were instructed to repass the same period of time in meditation, prayer, and sacrifice; and not to go out from the door of the tent of meeting under penalty of death. It seems natural to suppose that their hours of sleep were spent in those recesses of the tent which flanked the Tabernacle, and which may have been, from its earliest use, the dormitories of the priests who guarded the sacred shrine (Lev. viii. 35–36; x. 7).

An acceptance of this theory is alone wanting to make the touching history of the child Samuel's call to the ministry intelligible and doubly impressive. Here, in one of these little stone-floored cubicles, the aged Eli lay, doubtless screened off from all around by mats or rugs hung around as walls. In another compartment, possibly on the other side of the tent, little Samuel slept, and was awakened by the Voice, thrice repeated. 'For Samuel was laid down to sleep in the Temple of the LORD, where

the ark of God was' (1 Samuel iii. 3). The only alternative to the plan here suggested as having been adopted, is to suppose that both Eli and Samuel slept within one of the holy chambers which formed the Tabernacle proper. To anyone whose mind and memory are imbued with the facts and traditions of early Mosaism, such a contingency as this will be impossible of acceptance.

7. Thus far we have found that the means taken to secure the stability of the court of the Tabernacle and of the tent of the Tabernacle, were such as to increase their usefulness as well as to ensure their continuance.

We now come to the method by which the boards of the Tabernacle themselves were preserved in their alignment, and kept in an upright and symmetrical position. It will be plain, even to those who have no knowledge of the building art, that rows of 12 feet planks stood upon end, each of the width of 21·6 inches, would require more support than two tenons could give them, to keep them in a perfectly perpendicular line of 36 feet from end to end.

Let it be here noted that specific instructions were given to Moses that the tenons were not to be parts of the boards themselves. They were to be 'morticed' (*margin*, Exodus xxvi. 17) into the boards, separately. This would allow of harder wood being used for this purpose than that of the acacia or shittim, and by this means the holding power of the tenons would be greatly increased. But even this provision was not sufficient. Fifteen bars of acacia-wood were ordered to be made, five for each of the three sides of the Tabernacle. These bars were run

through rings of gold, by which we are to understand that they were gilt, and had an appearance of gold. The evidence for which is this:—Of the 48 boards, 24 had two rings in each and 24 three rings in each, giving a total of 120 rings. Each of these must have contained several ounces of metal, if indeed they were not cut out of wood, which is possible. Yet we do not find any appropriation of gold for the purpose of making these 120 rings. The inference is that, like the boards into which they were fixed, and like the bars which they were to contain, they were 'overlaid with gold'[1] (Exodus xxvi. 32).

There can be little difference of opinion as to the way in which the five bars on each side were placed with regard to one another. Four bars, of 18 feet each, being run into their rings, two above and two below, the fifth was used between the upper and lower sets to strengthen the 'break' of joint. This would give the required stability to the whole of each side. The five bars for the west side of the Tabernacle would be shorter, and were probably 6 feet in length. It is possible here to gain a ray of light on the obscurity in which the two corner-boards stand in Exodus xxvi. 24 and xxxvi. 29. The mention of the 'one ring' in each of these passages lends itself to the explanation that, the board being entire, each of its two sides should have a ring for each of the two end-bars that supported that side. This was all that was necessary to the security of the whole (cf. p. 195).

[1] The gilding would be done by the usual Egyptian method of sticking rather thick gold-foil firmly on to the wooden basis. Plates of gold beaten thin would form the foil, and gum-arabic, which is abundant in the desert, the medium.

PART IV.

THE TRIPLE CUBIT IN BABYLONIA AND IN PALESTINE.

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ON the behalf of Part II. of this book, it is claimed that it has established the fact of there having been three ells or cubits of the lengths given. With the application of these measures to Babylonian antiquities we do not now, except incidentally, concern ourselves. This is a work which is necessarily left to others to accomplish.

On the behalf of Part III., in which the triple cubit is applied to the specification of a single structure in the Arabian desert, it is hoped that several points will already have made themselves clear. If the long-lost key of an architectural enigma has been forged in our earlier pages, it has been practically applied to the elucidation of some portions of the world's earliest literature, with the result that we have recovered, not only the actual size of the Tabernacle in the wilderness (and this surely is much!), but also that of its true accessories and adjuncts.

(A) Amongst these additions to our knowledge may be named the restoration of the north gate in the court of the Tabernacle. It is true that this result does not arise immediately out of the application of any specific *measure*

to the case. But it has been arrived at by the more certain and thorough examination of the documentary evidence before us, which has been made possible owing to the possession of such a measure.

(B) Akin to this discovery is that of the place at the east gate for the 'stranger that is within thy gates,'[1] it now appearing that this injunction of the fourth Commandment applied solely to those aliens of Israel who joined in the worship of the true God, without the court, at the eastern space set apart for their use.

(C) The placing of the Altar of Sacrifice on the line of the *Soreg* is entitled to mention in this connection, as it not only allows us to differentiate between the altar and the slope by which it was approached, but enables us to locate the laver as filling the space between the platform-of-the-altar and the porch-of-the-tent.

(D) In the tent of the Tabernacle we have two main additions to our knowledge. One of these, with the aid of Josephus, enables us to see that 'the door of the tent of meeting' was not a mere threshold or entrance-way, but a clearly defined space, making the sin of Eli's sons possible (1 Samuel ii. 22), and accounting for the restriction given to Eleazar and Ithamar not to trespass beyond it.

In the elegant addition of a porch to the ordinary

[1] The presence of strangers, both in courts of law and at the worship of Jehovah, was recognised in Exodus xx. 10 and xxiii. 9, and their conversion to the faith of Israel is contemplated in 1 Kings viii. 41–43, and Isaiah lvi. 3–7. They were to be allowed to make offerings by fire to Jehovah, which comprised burnt sacrifices, votive offerings, and free-will offerings. A stringent rule forbad any distinction being made between these offerings and those of Hebrews (Numbers xv. 14–16).

Bedaween tent we have, further, the solution of the otherwise insoluble problem of the eleven curtains, a problem so old that the Talmud, in the *Gemara* on the treatise *Shabat*, thus states it:—'The eleven curtains were 44 cubits broad. Take away 30 for the roof. Fourteen remain. Take away 2 for the doubling. There remain 12, which trailed upon the ground behind, as a lady who went into the market and the ends of her dress followed her.'

(E) Even more important than this recovery of the porch in its bearing upon the future—Solomon's Porch being its crown of evolution—is that of the *twelve* side-chambers, under the eaves of the tent. These were the architectural germs out of which grew the *thirty* priestly cells in the Temple of Solomon, the *sixty* in the Temple planned by Ezekiel (twenty of which were Levitical chambers), and the *thirty-eight* in the Temple of Herod.

Nothing more clearly shows the intense conservatism of the later Jewish hierarchy and people in all things that concerned their national faith than the way in which these two cardinal points, i.e. the porch and the dormitories of their sacred buildings, were developed from the model of the Tabernacle, and were not super-added to it, as creations for use and ornament.

2. These five principal discoveries will show how great and manifold are the results which accrue from the transfer to Mosaic architecture of the linear measures of Babylonia. Taken from an age far anterior to that of Abraham, it is necessary to ask ourselves if the adoption

and preservation of these measures was, in every case, complete and entire, and if no modifications were made in them during the existence of the theocracy?

(*a*) There is one measure, i.e. the fundamental one, which, while it held its place in the Tabernacle and the Temples unaltered in length, was yet subjected to a different division, in its largest fraction, by the Jews.

We have seen, from the second column of the Senkereh tablet, that there were originally *three* digits or fingers in every 'palm.' It was a natural and almost inevitable result that in their new home beside the Mediterranean the Hebrews should collate the fingers and the palm (Ezekiel xl. 43), and decide that *four* fingers were the equivalent of the palm-breadth. We find, accordingly, that the hand-breadth was repeatedly used, as in the 'border' given to the table of shew-bread in the Tabernacle (Exodus xxv. 25), and in the thickness given to the casting of the brazen sea in Solomon's Temple (1 Kings vii. 26). This likewise was, in all probability—a probability amounting to certainty in my own mind,—the thickness of the castings made for the pillars Jachin and Boaz, which Jeremiah tells us (lii. 21) were hollow and had a thickness of four fingers. Evidence has already been given that Josephus reckoned four fingers as a palm.

(*b*) In the description of the colossal sea or laver in the Temple of Solomon, we are told in 1 Kings vii. 24, *margin*, that it was ornamented with open flower-buds placed 'ten in a cubit.'

As the cubit for brass-work was the one ordinarily in use, of 14·4 inches, we here obtain spaces, in which the

flowers were placed, of 1·44 inches. This was a natural but altogether unique measure, as the digit of Babylonia was 1·2 inches, and that of Palestine ·90 inch. This measure does not appear elsewhere, so far as is known.

The 10·8 inch Measure.

3. It will be within the reader's cognisance that no name is given to either of the three central measures in the Senkereh tablet or on the scale of Gudea. They have been called 'ells' as a matter of convenience, but this name has no warrant in either of the documents before us.

The smallest of these three measures has, however, been referred to as a 'span.' This name is taken from a cuneiform tablet in which it is stated that the walls of Khorsabad were 24,740 'spans' in length. Khorsabad was a royal suburb of Nineveh, and was built by Sargon the Second, who reigned over Assyria from 722 to 705 B.C.[1]

The suburb was enclosed by its own walls, which formed a parallelogram of more than a mile, and are still standing! The inscription of the tablet reads: 'Three ners-and-a-third, one stadium, one fathom-and-a-half, two spans: this is the dimension of the wall.' This capital inscription for the restoration of Assyrian measures has been thus wrought out by Oppert:—

[1] He is mentioned in Isaiah xx. 1, and was the father of Sennacherib, who succeeded him. A popular account, with illustrations, of Sargon's palace at Khorsabad is given in the 'Assyria' volume of The Story of the Nations, pp. 278–294.

$3\frac{1}{3}$ ner, of 7,200 spans each	=	24,000
1 stade, or tenth of ner	=	720
[1] $1\frac{1}{2}$ fathoms of 12 spans, each fathom being $\frac{1}{60}$ of stade	=	18
2 spans		2
Total circuit of walls ..		24,740 spans.

The walls themselves have been repeatedly measured, with the result that they are known to contain 7,422 yards of masonry; there being exactly 6,000 spans or 1,800 yards in each of the shorter sides, and rather more in the longer ones. If, therefore, we divide the total length of the wall by the number of units recorded, i.e. 22,266 feet by 24,740, we arrive at the result that each 'span' was 10·8 inches in length.

(*a*) It is unfortunate that the word 'span' has associations of physical measurement in our language which have led to a very general idea that a span of 9 inches was the half of a cubit of 18 inches. This idea has no foundation in Eastern metrology. Where the half of a cubit is meant, it is so stated, as in eight passages in Exodus and two in Ezekiel. These ten instances should lead us to seek for another meaning to the designation than that it was the half of any cubit-length. It was, in fact, nothing less

[1] This line is a striking commentary on, and confirmation of, the result sub-column (No. 6) of the second column of the Senkereh tablet, which shows a total of twelve small ells of the same length as the 'spans' here referred to. It was, therefore, a table of the fractions of a small fathom, as well as of the fractions of a small ell.

than another way of defining the short cubit. We have in the 43rd chapter of Ezekiel's prophecy the two measures placed in juxtaposition. In verse 13 the prophet states the width of the masonry which carried the grating of the altar as 'a span' (= $\frac{9}{10}$ of a foot). In the next sentence but two he gives the width of the altar-drain as being half-a-cubit in width (i.e. ordinary), which is equivalent to $\frac{3}{5}$ of a foot, this being the exact space to spare when all the other measurements of the court and of the altar have been accounted for. This should be decisive as to the distinction between the span and the half of any one of the three cubits derived from Babylon.

(*b*) It has already been shown (p. 202) that a cubit of three-fourths the length of another is the only possible explanation of the ten curtains of the Tabernacle being fitted into their places, the reason being that they alone, the veil excepted, were decorated with figures worked in gold thread. It follows that the Golden Table [1] and the Ark of the Covenant were designed by the same measure.

[1] The Jerusalem Talmud states (Menakhoth 97*a*) that there were three *amehs* or cubits—

(1) The smallest, of 5 hand-breadths, measured the vessels of the Temple.
(2) The medium, of 6 hand-breadths, measured the buildings, and consisted of two spans.
(3) (The length of the third is not given.)

If to these hand-breadths we give a width of 3·6 inches, the small cubit will have 18 inches and the medium 21·6 inches, the half of which was a span. These details were those of the Egyptian cubits, and were thus, when written, modern glosses on foundations of historical truth. We may be grateful for the general support they give to these pages, as to the difference of a palm between one cubit and another, and of the uses to which two of them were put.

The latter was an oblong box of $2\frac{1}{2}$ cubits (= 27 inches) in length, its height and breadth being each $1\frac{1}{2}$ cubits (= 16·2 inches). These measures are given by Josephus as being respectively *five* and *three* 'spans.' Here is the root of much misapprehension, caused probably by the Greek scribes employed by Josephus to translate his work being familiar with the Egyptian cubit of 21·6 inches,[1] of which the span was exactly one-half. Instead of dividing these figures, or giving them in cubits, as is done with regard to the Golden Altar of Incense, this error, arising from mental indolence or confusion, has come down to us, with widely misleading effects.

(*c*) Elsewhere the language of Josephus is irreproachable, as in the case of the height of Goliath. Samuel (1 : xvii, 4) tells us that his height was 'six cubits and a span.' These being commensurated thus :—

6 cubits, each 14·4 inches	.. =	86·4 inches.
1 span	.. =	10·8 „
give us a total of ..	..	97·2 „

In the Septuagint translation of the Old Testament, which dates from the close of the third century B.C., and in the *Antiquities* of Josephus, belonging to the close of the first century A.D., Goliath's height is given at '4 cubits

[1] Edersheim has remarked that the representation of the Shew-bread Table on the Arch of Titus is less in size than we should expect from its description. His cubit was one of 18 inches. It is to be hoped that some future visitor to Rome will test its dimensions by a cubit of 10·8 inches, and make public the result.

and a span.' There is, however, no real discrepancy here with our English Bibles, when once the metrology of the subject is understood in its geographical and chronological relations. The 'cubit,' as understood by the Greeks (the word itself being the *ammah* of the Hebrews, and the *ammatu* of the Assyrians), was that of the Egyptians, with whom they had more intimate relations than with the Jews. The Egyptian cubit being one of 21·6 inches, the height of Goliath was best expressed, *for Greek readers*, in its length. Not to have done so would have been to mislead, and to excite ridicule and doubt. Hence we have this commensuration:—

4 cubits, each 21·6 inches	.. =	86·4 inches.
1 span, or half-cubit ..	.. =	10·8 „
Total as before . ..	.. =	97·2 „ [1]

(*d*) The short measure before us is thus seen to have several Scripture names, being called 'cubit' in the description of the golden furniture of the Tabernacle, 'span' in the size of the High-priest's breastplate and in the height of Goliath. It has also a third designation in the Book of Judges (iii. 16), where Ehud is said to have made a dagger of a cubit or span in length. The word *gomed* occurs here only in the Hebrew scriptures, and is taken to mean a short cubit, as in the Greek translation of the LXX. the translation gives 'span or

[1] The height of Goliath was thus $8\frac{1}{10}$ English feet, which is somewhat less than that of the Chinese giant, Chwang, lately exhibited in Europe, whose height was 8 ft. 6 ins.

half-cubit,' in accordance with what is said above. The fact that he made it of this length shows that he consecrated it to what he deemed to be the highest patriotic purpose, as this was the most sacred cubit of the Jews, being that of the vessels of the sanctuary.

The 14·4 inch Measure.

4. This was the common measure, by which everything not excepted in the goldsmith's and surveyor's departments was measured.

We have seen that it applies to the height of Goliath. It was that 'cubit of a man' by which we are to read the size of the sarcophagus of Og, king of Bashan. Being four cubits in width, it was $4\frac{4}{5}$ feet, and being nine cubits in length, it was $10\frac{4}{5}$ feet. These measures are large, but are not marvellous, and they are not given as those of his physical proportions.

This was emphatically the builders' cubit, and after having gone through every item of every building specification in the Bible, I can state that it requires no modification, nor, if a single clerical error in Ezekiel be excepted, does it fail to yield good and true results in every case.

(*a*) Some walls of Babylon, described by Herodotus (i. 178), were possibly built by this measure. We know, from late German researches, not yet concluded, that the walls in question were not those of the city, but of the citadel. He does not say more than that 'A wall has been raised to the height of two hundred cubits, with

a width of fifty. Now the royal cubit is longer than the average cubit by three fingers.'[1]

If a cubit of an English foot-and-a-fifth be understood, the measures will be 240 feet and 60 feet. If the cubit of a foot-and-a-half be used, they will be 300 feet and 75 feet. Neither of these results was impossible of attainment for an inner fortress, but the smaller is the likelier. What alone at present is certain is that the walls of the citadel were not built with the span of Khorsabad, and that these through measures were not those of the famous walls of the city of Babylon, but of its central citadel.

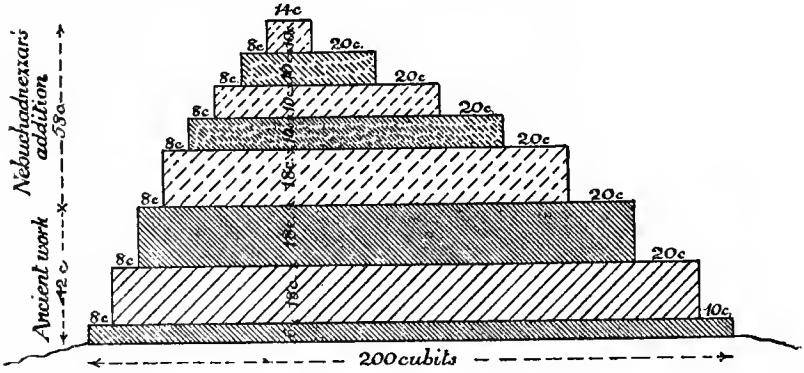
The 18 inch Measure.

5. Certain portions of Ezekiel's specification are written in large cubits, the fact being in every case notified. In addition to the ground-areas of the courts of the Temple being uniformly given in 18 inch cubits, the measurements of the Great Altar of Sacrifice are so given. Likewise those of the outer wall, its steps, and the east entrance-gate and its lodges. With these exceptions the large cubit, in his pages, is invariably one of open spaces. This fact is one which is capable of demonstration, but the demonstration is involved with that of other lengths referred to in these pages, and with some not mentioned, but which were used in the building of the Herodian

[1] This is independent testimony as to the primary division of the palm into three fractions, as shown in Part II. of this volume (pp. 124, 148). It may be an aid to the memory to know that each of these fractions or 'fingers' was one-tenth of an English foot in length.

Temple. The proof is one that is too long for these pages, but if opportunity offers it will be made public, so that all may judge of the case as a whole, as bearing upon the use of this family of measures in the Holy Land.

(*a*) Turning to Babylon, from which they were derived, we find an incontrovertible embodiment of the large cubit in the Great Tower of Nebo, at Borsippa, near the ruins of Babylon. This ancient temple is now known as the



RECONSTRUCTION PLAN OF THE *Birs-Nimroud.*
Scale, 50 feet to half an inch. 1 cubit = 1½ feet.

mound of *Birs-Nimroud,* and has been more carefully examined than any other Babylonian ruin. Sir Henry Rawlinson's account of it is contained in the eighteenth volume of the Royal Asiatic Society's Journal (*old style*). From this it appears that the partially-erected tower had stood for 500 years, when Nebuchadnezzar, about 600 B.C., determined on its completion.

It is possible to deduce from the data arrived at, all its proportions as they were originally designed. These are

most briefly stated in a series of tables of distances—all the cubits used being of the length of 18 inches—accompanied by a drawing of the tower, as it must have appeared in outline when completed.

The tables are as follows:—

1. Measures of Stages and Terraces.

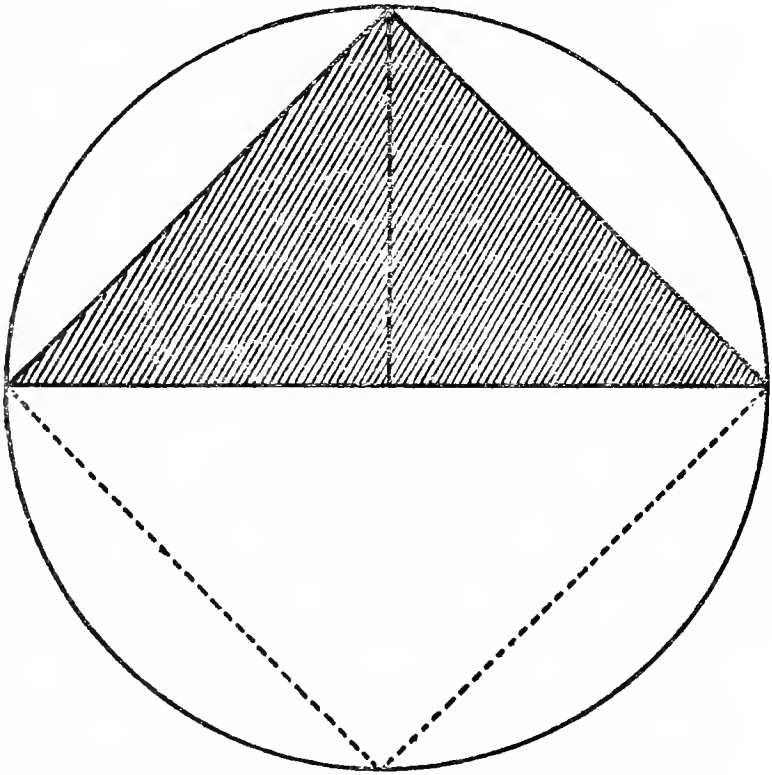
1. Height of basement	6 cubits	=	9	feet.
2. Width of rear terraces	8 „	=	12	„
3. Width of basement side-terraces	9 „	=	13½	„
4. Height of upper stages ..	10 „	=	15	„
5. Width of upper side-terraces ..	14 „	=	21	„
6. Height of lower stages	18 „	=	27	„
7. Width of front terraces ..	20 „	=	30	„

2. Squares of Brickwork—Sizes.

1. Foundation basement, a square of	200 cubits	=	300	feet.
2. First, or lowest, stage „	182 „	=	273	„
3. Second stage .. „	154 „	=	231	„
4. Third stage .. „	126 „	=	189	„
5. Fourth stage .. „	98 „	=	147	„
6. Fifth stage .. .. „	70 „	=	105	„
7. Sixth stage .. .. „	42 „	=	63	„
8. Seventh stage .. „	14 „	=	21	„

It is thus seen that not only were all the distances governed by a common denominator of 18 inches, but that the reduction in size was accomplished by making each stage 28 cubits less in the square than the one

immediately below it, the foundation basement being 18 cubits larger than the stage immediately above it. The top of the tower was a plain surface of 21 feet each way.



GEOMETRIC PRINCIPLE OF THE TABERNACLE TENT.
(*The shaded portion represents the proportions of the Tent of the Tabernacle.*)[1]

[1] The diameter of this circle is 3·6 inches, and is drawn so as to act as a standard of measure for the breadth of the human palm, which is believed to be the fundamental of all length-measures. Each reader may test its correctness, *as an average*, by placing his own hand over it.

(*b*) Measures apart, the point at which this ancient structure touches the architecture of the Jews lies in this fact:—The total height of the *Birs* is estimated to have been 100 cubits, or 150 feet; the total width to have been 200 cubits, or 300 feet. It is in exactly these proportions that the Tabernacle in the Wilderness was erected, its height being 15 cubits and its width being 30 cubits.

The predominance of the Babylonia cycle of 60 and its fractions, in the constituents of the Tabernacle, is too apparent to have escaped the reader's notice. The one exception is the length of 'an hundred cubits' given to the court. It is now, however, apparent that the court consisted of two squares of fifty cubits each, so that this exception to the rule of sixties is more apparent than real. By the form of the specification, attention is called to the fact that all parts of the court had an equal sanctity.

Not less significant than these coincidences is the fact that the twelve uprights of the Tabernacle, i.e. its pillars, were arranged in groups of *three, four*, and *five*; thus recalling to mind the allocation of palms in cubits of *three, four*, and *five*[1] hand-breadths. The discovery of this last-mentioned fact has led to the conclusions of these pages. Other, and still more important ones, are to follow in subsequent volumes from the same premises.[2]

[1] These figures being multiplied together give the cycle of 60. The far-reaching influence of Babylonian supremacy in Asia is seen in the fact that the Chinese and the Hindoos of to-day reckon the passage of their years in periods of 60, and not in hundreds. The native Chinese also have three yard measures in common use.

[2] Cf. footnote to p. 168.